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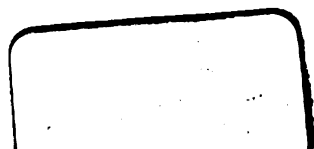
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The House
 by Edward Taylor

PLATE I.

THE FLOWER,

THE PROPERTY OF MESSRS. E. AND A. STANFORD, EATONS, STEYNING.

The Flower is a rich bay Clydesdale mare, standing sixteen hands three inches high, and though so grand a mare, moves like a pony. She is by the Duke out of Violet, and was bred by Messrs. Stanford, who are so well known as exhibitors of Clydesdales. A portrait of the Duke appeared in the "Farmers' Magazine," of December, 1875; but since then he has been sold to Mr. Rolls, The Hendre, Monmouth, where he now stands. The Flower has won the first prizes at the following shows:—Steyning and Pulborough in 1871, the Bath and West of England, at Dorchester; the Royal Counties

at Windsor; and Steyning, in 1872. She was not exhibited again until 1875, when she won the first prize at the Royal Agricultural Show, at Taunton; the Bath and West of England, at Croydon; the Royal Counties, at Portsmouth; the Tunbridge Wells; the Slinfold; the Chichester; and the Steyning. In 1876 the Bath and West of England, at Hereford; the Royal Counties, at Abingdon; and the cup for the best mare; the Cambridge and Isle of Ely; the Tunbridge Wells, and cup for the best horse, mare, or gelding of any description; and the Steyning.

DODDER.

There are weeds, as well as diseases, whose presence here is due to importation from foreign lands, and one of these is dodder. Although this parasite is by no means uncommon, it is only occasionally that it appears in sufficient abundance among our cultivated crops to attract the attention of the agriculturist. The two British species may generally be found without much search; the greater dodder (*cuscuta Europæa*) is parasitical on thistles, nettles, and several other wild plants, and the lesser dodder (*cuscuta epithymum*), which is rather more plentiful than the other, grows on the thymes, heath, ling, furze, &c. Nearly related to the last—probably the same plant altered a little by the character of its host—is the clover dodder (*cuscuta trifolii*), which has been introduced into this country from the Continent. There are also the lucerne dodder (*cuscuta hirsuta*), and the flax dodder (*cuscuta epilinum*), which have also found their way here amongst the seeds of the lucerne and flax. Neither of these crops are grown extensively in England or Scotland, and in Ireland, where flax culture is a prominent feature of husbandry, we seldom hear of any great damage being done by dodder. No doubt, the true explanation of this lies in the fact of the great disparity in the size

of both flax and lucerne seeds to those of the parasite, so that they may very easily be separated; and now that greater attention is being paid to the cleanliness of all kinds of farm seeds, it would seem an act of unusual carelessness to sow dodder with either of these crops. Not so, however, with clovers, for although the seeds of the parasite are smaller and of a different colour and shape, they may very easily be overlooked in an ordinary sample of clover seed. Growers of clover seed, as a rule, have not the necessary appliances for properly cleaning it, and the separation of dodder with hand sieves is an undertaking the extent of which is known only to those who have tried it. On the other hand, our large seed firms have no excuse for sending out samples containing dodder or any other hurtful seeds, and as a matter of fact the greatest care and attention is given by them to secure cleanliness. The seed of the clover dodder is about one-third smaller than that of red clover, of a grayish colour, and shaped like Brazilian nuts. Under a common lens it has much the appearance of buckwheat. It will not be out of place here to remark that a good pocket lens is one of the most useful things a farmer can carry about with him.

The regulation equipment, consisting of a piece of string, a pocket knife, and a shilling, will have its standard greatly raised by the addition of a lens.

Whilst, therefore, the first precaution against dodder lies in careful examination of the seed, the next will be to look carefully for it amongst the clovers about the time they are coming into blossom, and to cut the clover for a distance of several feet round each patch of dodder as soon as it makes its appearance. It has been recommended to water the patches with a solution of sulphate of iron (green vitriol); but although the acid certainly does destroy the parasite where it comes into direct contact with it, the difficulty of dealing effectually with dodder in this way is very great—impracticable in fact. The filaments of the parasite, as they stretch from plant to plant, present the appearance of an immense spider's web made of wet transparent threads, which are first a reddish white, and then yellow. The great object is, of course, to prevent the flowering, which takes place in a week or so, and the little bunches of pink-and-white flowers are hidden by the clover, around the stems of which they are formed in clusters, as well as at intervals on the single threads. After these patches have been cleared it will be advisable to pare the ground and form a heap which can be burned when the clover crop is cut and carried.

The dodder belongs to the natural order *Convolvulaceæ*, of which the common bindweed or convolvulus of the corn fields, and the larger bindweed or calystegia of our woods and hedgerows, are indigenous members. Amongst the foreign species are the scammony (*convolvulus scammonia*), jalap (*exogonium purgans*), and the sweet potato (*batatas esculenta*); but the dodder alone, of this order, is parasitical. The seeds germinate in the ground, and a threadlike stem is sent upward, which coils itself round the stalk of the clover plant like any other convolvulus. Up to this stage the young plant subsists on the food stored up in the seed from which it springs, in exactly the same manner as ordinary plants, before they put out their true leaves, and no nutriment is derived from the soil. This stage of plant-life is analogous to that of a foetus in the animal kingdom. After a few upward turns around the stalk of the host plant, a coil is formed, and from this coil of dodder thread there is sent out a number of fine roots of a secondary or adventitious character—the radicle not being developed—after the manner of monocotyledonous plants. These roots penetrate the epidermis of the clover stem, and the dodder commences its second or adult stage of life as a true parasite, living on the eliminated juices of the clover plant, and the seed stem dies away. The filiform stems of the dodder, which are leafless, extend and form fresh coils and fresh roots on every clover stalk within its reach, spreading indefinitely, and quickly destroying the plants on which they feed. These threads are full of moisture, and are known provincially as "devil's guts." To attempt to eradicate the pest by tearing the tangled mass to pieces would only have the effect of extending its growth to every host

plant within reach, as each segment would become a new centre. The seeds are capable of germinating from the capsule quite as readily as in or on the ground, provided they are exposed to heat and moisture, and in this manner its rapid progress, when firmly established, may easily be understood. It has been stated that the seeds of dodder do not germinate the first season they are committed to the ground, but there is nothing to adduce in proof of this assertion, and the fact of germination taking place in the capsule is direct evidence to the contrary. The idea has probably arisen from the circumstance that clovers are attacked by it in the second year of their growth, the dodder being an annual. The only explanation that can be given of this is that the dodder's seeds which are sown with the clover germinate at once, and spring up with the young clovers; but the clover plants not being then in a condition to afford support to the parasites, the latter perish, such seeds only of the dodder which, from various causes, escaped germination at the onset, remaining in the ground and coming to life the second year if favourable conditions are afforded. Being of eastern origin a higher temperature than is usually met with in this country may be necessary to the germination of dodder, and the great prevalence of the pest in the summer of 1870 may be accounted for in this way. There is every reason to believe, from its occasional and otherwise unaccountable appearances in certain localities, that, like other small seeds, it will sometimes lie for years in the ground, germinating only when brought under suitable conditions. As previously stated, the dodders do not confine themselves to any one order of plants, and Mr. Carruthers gives an instance of a field of swedes being infested with one of the species; but the clover is the only cultivated crop which affords any scope for its depredations. If, therefore, the pocket lens be used when the seed is purchased, and the eyes carefully employed on the growing crop, the evil will not be likely to assume a form with which we are incapable to deal.

BRECONSHIRE CHAMBER OF AGRICULTURE.—

The annual dinner of this Chamber took place at Brecon on June the 18th, Mr. H. P. Powel, the President, in the chair. The Chairman, in proposing "Success to the Breconshire Chamber of Agriculture," referred to the use of Chambers, cattle disease prevention, local taxation, and county boards. As an illustration of the frightful ravages caused by the diseases he referred to the year 1872—according to the returns prepared for the county of Hereford—and no returns could, he had heard, be more reliable—the total loss incurred from foot-and-mouth disease amounted to £19,580,000, and against that terrible loss they could only place something like £4,800,000 to foreign food brought here. Now, that showed how far this was a protection to their animals from foreign disease, and how far more important this protection was to the farmer than the protection he was likely to get from abroad in the shape of the exportation of live stock. Not only did they believe that there would be an enormous saving effected by the restrictions adopted, but they believed also that by the meat being brought from abroad in a dead state, it would not only be brought with greater facility and security, but in a much more healthy condition, so that the British consumer would from those two sources derive great benefit.

ABORTION AND MORTALITY AMONGST EWES.

An able lecture, containing a great deal of important information for flockmasters, was delivered in the Wayland Hall, Watton, on Monday, May 28th, by Mr. Hy. Woods, of Merton, on "Abortion and Mortality amongst Ewes." There was a very large attendance of flockmasters and of shepherds, who evinced the greatest possible interest in the lecture, which occupied more than two hours in the delivery, the Lecturer speaking from notes. The chair was occupied by Mr. T. Barton, of Threpton.

After a few introductory remarks by the Chairman, Mr. Woods said—Mr. Chairman and gentlemen: I trust it is unnecessary for me to make any lengthened excuse for standing before you this evening, because I do so not of my own seeking. It was the earnest desire of several of the large flockmasters of this county, who have suffered considerable losses during the last winter and spring, that I should institute an enquiry and endeavour as far as might be possible to ascertain the probable causes of the serious mortality that has taken place in so many of the flocks of this and other counties of England. I recognised fully the importance of the subject; and was not unwilling to do anything that lay in my power to assist my friends and neighbours. When first I undertook to comply with the request, I thought that it would be quite sufficient if I sent out some forty or fifty circulars to flockmasters in Norfolk, but on stating my intention to that very able man, the editor of *The Agricultural Gazette*, for whose opinion on these matters I have very great respect, he said he thought that the result would not be satisfactory to myself unless I issued at least 500 circulars, and he recommended me to do so. This suggestion I adopted, and I am much gratified to state that not only did I receive a very great number of answers, but that the questions contained in the circular being published in *The Agricultural Gazette*, many gentlemen, several of them resident in Ireland, forwarded answers to me without personal solicitation; but as these answers were uniformly satisfactory as showing the trifling loss of lives which has occurred there, principally from feeding on grass, I shall not feel it necessary to particularise them in this lecture. It has, of course, been quite impossible for me to acknowledge all the answers with which I have been favoured,—indeed I have only communicated with those from whom I desired to elicit further information,—and, therefore, I desire to take this public opportunity of tendering my thanks to those noblemen and gentlemen in various parts of England and Ireland who have not only with readiness and promptitude made returns, but supplied me with information of the fullest possible description.

OUR MEAT SUPPLY: DECREASE OF MUTTON.—There is no doubt whatever but that in England the consumption of meat is enormous—greater than in any other country in the world. We are essentially a meat-consuming people. And I think from what we have seen and from what we read we cannot avoid the conclusion that to meet the demand we must mainly depend upon our home supply. The importations of cattle from abroad have been variously estimated. In a leading article which appeared in *The Times* a fortnight ago, it was stated that Professor Brown had arrived at the conclusion that the supply of foreign meat into this country amounted to something like 14 per cent.; that Lord Fortescue, as St. James' hall, estimated it at 10 per cent., and that other authorities put it at 7½ and some as low even as 5 per cent. But suppose we take it at 14 per cent., that is a per centage which bears but a small proportion to our necessary home supply. It would also appear, whatever doubt may surround the extent of our future supplies of beef from America, that so far as mutton is concerned, we have very little to fear from the competition of that country. By the Government returns it appears that

The number of cattle in the United States in 1876 amounted to	27,230,300
And in Great Britain and Ireland for the same year to	9,997,189
Showing in favour of America	17,233,011

Now, it is a matter for astonishment, considering the vast area of the country, and the magnificent table lands with which it abounds—and a great part of these lands is of the best kind we can possibly conceive for the breeding and grazing of sheep—that the number of sheep in America should be so small when compared with the number to be found in the limited area of the United Kingdom, for the Government returns show that

The number of sheep in the United States in 1876 were	33,783,600
Ditto in Great Britain and Ireland	32,252,579

Showing in favour of America only

1,511,621

Thus, then, while America had in 1876 upwards of 17 million more cattle than Great Britain and Ireland it had but a million and a-half more sheep. This remarkable disproportion between the number of cattle and sheep will, I think, justify the inference that we must chiefly rely upon ourselves for our supply of mutton. Moreover, I believe that mutton will always command a good price in England. It is still in demand in the northern and manufacturing districts, although trade is very flat there, and this demand we may expect to increase when trade revives as revive it will. The truth is that if the colliers and other well-paid workmen in those parts, who are by no means over temperate in their habits, get drunk over night, they have too delicate an appetite to eat beef at breakfast next morning, but may be tempted by a nice mutton chop, especially if it is cut from the carcass of a Southdown sheep. Under these circumstances the question we ought to ask ourselves is this—Are we doing the best we can to make our supply of mutton as great as it ought and might be? Looking at the Government statistics and at the returns I have received I really have great doubt of this in my own mind. What say those statistics? Why, that there has been a gradual decrease during the last eight years. We will take the years 1868 and 1869 and 1875 and 1876, and compare them one with the other:—

In 1868 the number of sheep and lambs in Great Britain and Ireland was	35,607,812
In 1869, do. do.	34,250,272
Being a decrease in 1869 of	1,357,540
In 1875, do. do.	33,491,948
In 1876, do. do.	32,252,579

Being a decrease in 1876 of

1,239,369

Analysing these figures we find that in 1876 we had the enormous decrease of 3,355,333 as compared with 1868. Yes; this really is a very serious matter, and one which affects deeply not only the interests of the flockmasters but of the meat consumers of the whole kingdom.

CAUSE OF DECREASE: THE FEEDING AND MANAGEMENT OF FLOCKS.—What has been the cause of this astounding decrease in the number of sheep in this country during the last eight years. It is quite impossible, as you well know, to answer this question by isolated experience. Will, then, the voluminous returns of disease and death that I have received from all parts of England and Ireland shed any light upon it? I will leave you to judge when you have heard what those returns say. It is impossible, as our able Chairman has said, to deal with such a mass of material, and so great a number of figures in anything like detail, and, therefore, I have taken 50 cases where the feeding and results are most satisfactory, and 50 other cases just the reverse. The 50 good cases comprise 25,281 ewes, and in that number of ewes the cases of abortion only amounted to 126, and the deaths from all causes up to the end of April to but 222. The 50 unsatisfactory cases comprise 21,682 ewes. Of these 50 returns 22 do not report the actual number of abortions, contenting themselves with acknowledging to heavy losses, but the remaining 28 alone give the startling number of 1,884. In ten out of this same 50 returns, the owners while admitting great loss of ewes are absolutely silent as to numbers; and yet the remaining 40 give a total of 1,255 deaths. It will, therefore be seen that our 50 satisfactory cases show only one

abortion, and not quite one and a-half deaths in every 200 ewes, whereas in the other cases although nearly one-half of the abortions and one-fifth of the deaths are not returned, we have seventeen and a half abortions and eleven and a half deaths in every 200 ewes. Having stated the broad and general results disclosed by the great numbers of returns I have received, I now invite your attention to five representative cases, selected from five different counties, undoubtedly showing what proper feeding and management will do. These cases I have numbered 1, 2, 3, 4, 5.

No. of the case	No. of Ewes.	County.	Abortions.	Deaths.
1	344	Norfolk	0	0
2	729	Warwick	4	7
3	1080	Sussex	0	7
4	1208	Kent	0	5
5	1750	Notts	0	12

Putting these figures together it will be seen that there were only four cases of abortion, and thirty-one deaths in 5,109 ewes—a loss that is really infinitesimal. I will now take five representative cases also from five different counties which tell a very different tale from that you have just heard. You must bear in mind that the cases now to be quoted refer, with one exception, to smaller flocks than those previously given, and I don't think you practical men want me to point out how much more easy it is to manage a small flock of ewes than a large one. For the sake of reference I have numbered these cases 13, 14, 15, 16, 17.

No. of case.	No. of Ewes.	County.	Abortions.	Deaths.
13	570	Lincoln	136	37
14	190	Suffolk	112	26
15	340	Warwick	98	36
16	560	Wilts	100	30
17	590	Norfolk	130	105

The figures I have given will be found to show that out of 2,240 ewes, there were 576 cases of abortion, and 234 deaths, being, within a fraction, 26 abortions and over nine deaths in every 100 ewes.

ANALYSES OF SATISFACTORY CASES.—I will now proceed to give you the details of the five satisfactory cases I have referred to, supplementing them by seven other cases, in which flockmasters have done equally well. These cases, including the five to which I have already referred, are numbered from 1 to 12 consecutively.

No. 1.—A valuable flock of 344 long woolled ewes in West Norfolk, on a farm where the soil is of a mixed character, with a chalk subsoil; the ewes were tugged on old layers, and from the time of the rams being taken from them they were run on to grass land every day, and went to a limited fold of common turnips at night, having also five bushels of hay chaff per acre per day. The turnips were grown with 4 cwt. of rape cake per acre after sheep feed-rye. The ewes remained remarkably healthy, and there was not a single case of abortion, nor did one ewe die. There were 100 pairs of twins, and all the lambs were strong and healthy. I see a good many of you shepherds are smiling as though you would say, "That's the way to do it."

No. 2.—This comprises 729 Shropshire ewes, located in the county of Warwick; and I invite your attention to the great care with which this return has been made, the owner evidently being a highly intelligent man. During the tugging season the ewes were on stubbles during the day, and on pasture land at night. They did not take the ram freely until the middle of October, when they went rapidly. From Michaelmas to Christmas they were kept on grass land, with an allowance of 3½ lbs. of swedes, and 1½ lbs. of hay per sheep per day. From Christmas to the time of lambing a few mangels were mixed with the swedes, and the more weakly sheep had ½ lb. of linseed cake and ½ lb. of de-oiled cotton cake per day. The owner remarks:—"My experience leads me to know that serious losses are sustained by giving ewes too

many roots, without sufficient hay, straw, or other dry food being given to counteract their ill-effect." The roots were grown on strong loam, and had 4 cwt. of bones, 1 cwt. of guano, and 30 bushels of ashes per acre. The ewes were very healthy, and there were only seven deaths and four cases of abortion. I think you will say that this is very "good luck," as it is called. The lambs also dropped healthy, and remained so at the time I last heard from the owner.

No. 3.—A fine flock of 1,080 Southdown ewes in Sussex, always managed with great care. The old ewes were fed wholly on grass during the winter. The shearlings had grass and hay, and about a fortnight before lambing a few swedes grown with farmyard manure, and a small quantity of superphosphate. There was not a single case of abortion, and but seven deaths.

No. 4.—This is a flock of 1,206 Kent ewes, in the county of Kent. They were tugged on marsh and upland grass, and were fed on grass throughout the winter. After lambing they had a few mangels thrown to them. The ewes are reported as being very healthy, as may well be imagined when we learn that there were only five deaths from Michaelmas last to May 1st, and not one instance of abortion. There were a good number of twins and some triples, and the lambs were and are healthy, although they have been a good deal exposed to the cold north-east winds, the way in which the ewes were kept during the winter having apparently given the lambs the strength and the power to endure the vicissitudes of the weather.

No. 5.—A flock of 1,750 short-wooled ewes in Notts. They were tugged on old grass and layers, and afterwards nearly up to Christmas had turnips thrown on grass. Then they had a change to a small allowance of swedes up to January, when common turnips were given. Now, a point here that strikes me as well deserving the consideration of those who have the opportunity to do it, is this: the ewes were always taken from the turnips on the Saturday night and put on pasture land, where there was a good deal of what I believe is provincially called "old fog grass," till the Monday morning. This is a good plan for two reasons:—First, because of the rest from the turnips it gives to the sheep; and, secondly, because it enables the shepherd to attend church on the Sunday, which I hope they do sometimes here. The turnips in this case had a rather heavy dressing of half-inch bones and bone dust, and when on the turnips the ewes had as much sweet oat straw (which I presume to mean, from what I know of Nottinghamshire, oats that have been well got up, and the straw of which is clean and savoury), with a liberal mixture of hay, as they could eat, the hay being increased as the time for lambing approached. Now, when I inform you that out of these 1,750 ewes there was not a case of abortion, and only twelve deaths—these chiefly old ones and wasters—and that the lambs were very healthy, you will agree with me that the flock was exceedingly well managed.

No. 6.—Taking a rather long leap we come from the county of Nottingham to the county of Norfolk. Here we have a flock of 380 blackfaced ewes on a farm, the soil of which is light, and which is situate not very far from the city of Norwich. The ewes were tugged on mustard with a liberal allowance of "Morgan's grains" and some linseed cake. When the rams were taken away, the ewes were put on white turnips, with a daily run out on to pasture. They had as much chaff, bran, and other dry food as they could eat, and the turnips were grown with farmyard manure. The owner I should say is of a facetious turn of mind, for he remarks:—"Ah! your superphosphate stuff won't do for me." Abortion was unknown, three ewes only died, and the lambs averaged one and a-half to a ewe. Both the health of the ewes and the number of the lambs alike testify to excellence of management. Whether it is the linseed cake or the alcohol in "Morgan's grains" which most deserve credit it is perhaps not for me to determine, but the result is so satisfactory that I should say, "Well done 'Morgan's grains'!"

No. 7.—A flock of 280 Hampshire Down ewes, in the county of Norfolk. It gives me very great pleasure to see present the owner of this flock. He is evidently a man alive to his own interest. More than this I will not say in his presence. The ewes were put to the ram on the 1st of October on new layers and pastures. Up to Christmas they were fed on pastures in the day, and had mangels and swede tops at night. At Christmas they were put to white turnips, went on

to pastures in the day, and had as much good meadow hay chaff as they could eat. They were on rather strong land up to Christmas, and after that on rather light. The turnips were grown with farmyard manure, no artificial manure being used. And here let me direct your attention to a wise precaution which the owner took, proving the intelligence of his mind and the soundness of his judgment. After the middle of January, to avoid the injurious effect upon the ewes of rack tops at a period so near lambing, he had the tops mown off the turnips, and the consequence was the ewes remained healthy, he had no case of abortion, and no more than one or two of the lambs died, while the average was one and a-half to a ewe. In his return the owner makes a remark so pertinent that I will read it. He says, "I consider the fact of my mowing off the turnip tops, combined with a liberal allowance of good hay chaff, to have been a great cause of my ewes doing so well." This case speaks for itself, and I will make no further comment upon it.

No. 8.—This is a well-known and valuable flock of 500 long-woolled ewes in this county. The soil of the farm is of a good mixed character; and the flock has been always treated carefully and judiciously. The ewes had grass up to the time of lambing, with some good hay chaff. They were very healthy, and did remarkably well. There was no case of abortion, and no ewes were lost from Michaelmas up to lambing; but three kind-hearted "old ladies," thinking, perhaps, that the shepherds might be too conceited if there was no loss at all, took it into their heads to die during lambing, but the only observation that this circumstance calls for is that I suppose at some time or other, even in such a flock as this, one or two sheep ought to die, if only to remind the master and shepherd that there is such a thing as ewes dying from lambing. There were not so many twins this year as usual among the shearlings, but, excepting the shearlings, nearly half the ewes had twins, and the lambs dropped strong and healthy, and remain so.

No. 9.—Now take a flock of 800 black-faced ewes on as poor a farm as any in the county of Norfolk. They were folded on green lupines during tugging, and had a run out to grass part of the day. After tugging they had a reasonable allowance of turnips, grown without manure, and also some ground lupines mixed with hay chaff. Nearer the time of lambing, malt calms were added to the previous allowance of dry food. There were not more than five or six cases of abortion, and the loss of ewes was said to be very small—not more, I should infer, than eight or ten. The lambs dropped very strong and healthy, and remain so. I give this immediately after the preceding case, as it shows that by careful and judicious management ewes may be kept healthy on two entirely different kinds of soil. One farm has soil as good as can be desired; the soil of the other is such that I should not like to be a rabbit upon it. Yet during a winter which is admitted on all hands to have been most unhealthy, this large flock of 800 black-faced ewes have been preserved in excellent health, and I trust the shepherd will get the reward that he so richly deserves.

No. 10.—I will next take a flock of 500 Hampshire Down ewes from the neighbourhood of Blandford, Dorset. This return only came to me the latter part of last week; otherwise it would have been placed in the schedule of specially selected good cases. The soil is of a light chalky character. The ewes were put to the ram on the 12th August, and fed on grass, rape, and turnips. After the rams were taken out they were fed on turnips, hay, and grass up to Christmas. From Christmas they were put in a yard at night, and had a limited allowance of turnips, and as much hay as they could eat. The turnips were grown with 8 bushels of bones and 1 cwt. of what appears to be (the writing being indistinct) swede manure per acre. Now, mark this! There were only two cases of abortion, of which one was in November, and only one ewe died, and she was cast. This is to me such an altogether unprecedented case that I should have been disposed to question the return had I not known the sender to be an honourable man, and received confirmatory testimony from other parties. I ought to add that the lambs dropped a good colour, and were very healthy; and that a great many twins were reared; and that at the time the return was made (May 21st) the ewes and lambs were still doing well. This case I will leave for your consideration.

No. 11.—I have now the pleasure to notice a flock of 300 good half-bred ewes in this neighbourhood, and although I

am very properly tied not to give names, this much I may say without impropriety, that the flock belongs to a gentleman who occupies a chair not far from my right hand. The ewes were tugged on layers, and went to a fold of common turnips at night. They had a daily run out until Christmas, and from Christmas a good allowance of hay chaff, with $\frac{1}{2}$ lb. of bran per ewe per day. The soil of the farm is of a light mixed character, and the turnips were grown with about from $\frac{1}{4}$ to $\frac{1}{2}$ cwt. of Fison's tarap manure, and the same weight of rape-cake. Not one case of abortion occurred, and but a small percentage of ewes died. In congratulating our much respected friend on his success, we will at the same time hope that, by laying in a good stock of bran, he may do still better next year.

No. 12.—I now propose to give you the result of the management of one of the most spirited and successful breeders of cross-bred sheep in the county of Norfolk, and in doing so my mind could almost lift itself within the sound of Garboldisham Church bells. There were 545 ewes, a cross between Norfolk and Southdown sheep. They were run on layers during tugging, and had a fold of turnips at night. From the end of October to Christmas they were given a small allowance of white turnips daily, with from 16 to 18 sacks of good chaff—half from good hay, and half from oat and pea straw. From Christmas to a month before lambing they were kept in much the same way, but they had 4 bushels of Manilles linseed cake, 4 bushels of malt calms, and 4 bushels of bran, added daily to the chaff before named. The owner is so eminently practical that I shall make no excuse for reading the remarks he has made as to the management of his root crop. He says: "I have always been in the habit of carting a great deal of farmyard and box-made manure for turnips, turned over and mixed with mould and road scrapings and a small quantity of turnip manure, just enough to get them to the hoe as quickly as possible. I prefer rape cake where my breeding ewes fold them off. I consider by manuring well with farmyard manure for the root crop I get more barley, and the next year my new layers produce more hay, and likewise feed, and will carry more stock." Now, out of these 545 ewes, there were only two cases of abortion, and from the 11th of October, 1876, to the 21st of April, 1877, only nine ewes had been killed and lost from all causes, whilst 700 lambs had been tailed, and there were 15 more ewes to lamb. These facts speak for themselves, and need no remarks from me to impress them upon your minds. I would, however, venture to read another extract from the note of the owner:—"I see by my old books that I have grown a lamb and a-half to each ewe for the last seven years, but I think I shall come a little short of that this year; but I never had better luck in lambing than I have had this season, and my lambs are very good and healthy. I think that fairly liberal and judicious feeding has much to do with the good health of both sheep and cattle." There are few persons who will be disposed to deny this.

ANALYSES OF UNSATISFACTORY CASES.—Having now given you twelve representative cases in which the ewes have done remarkably well, I will ask you to direct your attention to the details respecting twelve flocks of ewes which show a widely different result. These cases I distinguish by the Nos. from 13 to 24, both inclusive. The first is—

No. 13.—A flock of 570 Lincoln ewes in the county of Lincoln. The ewes were put to the ram on the 30th September last on old and new layers, and took the ram well. From leaving the ram they were fed principally on turnips, grown with 8 cwt. of superphosphate and 2 cwt. of bone dust per acre. The soil is what is called "Wold chalk." Of the ewes 100 shearlings, which are known in the midland counties by the name of "gimmers," had 30 lbs. of cotton-cake daily from the 1st of February. For a week before and up to lambing they had $\frac{1}{2}$ lb. per head of mixed oats and linseed cake. The ewes did pretty well up to a fortnight of the full time, when they began to abort to the number of 136. 36 ewes also died during lambing. The lambs dropped a bad colour, especially the latter part of the time. In addition to these losses many lambs were lost when they were from two to three weeks old. They had large bodies, or were what is commonly called "pot-bellied." They commenced frothing at the mouth, and a *post mortem* showed their livers to be enlarged and full of white pimples. Various remedies were tried, but nothing seemed to do them any good. The owner states that a large proportion of the ewes that aborted were shearing ewes—and be so good as to bear in mind that 100 of the shearing ewes had cotton

cake from the 1st of February, and this without any hay or chaff. Possibly the heating and indigestible nature of this cotton cake had an injurious effect upon these shearing ewes, and the linseed cake and oats were given much too late to remedy the evil. It is, in fact, another instance of locking the stable door after the thief has gone off with the steed.

No. 14.—This is a remarkable and, I should also say, a very painful case. It is that of a very small flock of 180 good cross-bred ewes in Suffolk, managed by a gentleman who is an executor under a will. The ewes were tupped on marshes and stables, and had a small allowance of maize daily while with the ram. From the time of leaving the ram they were fed on marshes and other grass land till February, when they were put on to swedes, of which they had a large supply, grown from fold manure. They were also given a few malt chives, with some pea and cloverseed straw chaff. The soil is of good mixed staple. A fortnight before lambing the ewes began to abort. There were 119 cases of abortion, and 26 ewes died in lambing. The owner believes the swedes were the primary cause of the mischief. So do I; and so, I think, would any person who saw my returns as to the losses sustained where breeding ewes have been fed on swedes. Many and serious have been such losses, and although there are exceptional cases of ewes fed on swedes doing well, they have, in those cases, had an allowance of good and nutritive dry food, which appears to have neutralised the pernicious effect of the swedes.

No. 15.—A flock of 340 Shropshire ewes in Warwickshire. They were tupped on seeds and grass. After being taken from the ram they were fed on hay and turnips to Christmas, when swedes were given them. The turnips and swedes were grown with superphosphate manure on good mixed soil. The ewes commenced aborting a month before lambing, the number of such cases being 98, and 36 ewes died in lambing. The live lambs, moreover, were not dropped a good colour; they did not seem healthy, and have been more or less weakly since they were lambed. Here, then, is another case for your attention as to the effect of giving swedes to ewes when in lamb.

No. 16.—This is, I consider, a very interesting case, and I must ask you to follow me carefully, for it at first presented a difficulty to my mind as to how the feeding could have so materially affected the flock, which comprised 560 Hampshire ewes in Wiltshire. The ewes were put to the ram on the 24th of August last. During that time they were fed on grass fields, downs, and stubbles. All were tupped within a month, and they all stood but four. Now, as you know, there was last year in the West of England a great failure of the root crop, and the owner of this flock appears to have been one of those who suffered. He had no roots to give his ewes, and, therefore, when they finished the grass and stubbles they were put on hay with water. There were 100 or more cases of abortion, and thirty ewes died. The owner's and shepherd's opinion is that the ewes caught a chill about a fortnight before their time was up. This I don't doubt. But when I saw "hay and water" stated to be the food on which the ewes had been kept through the winter, I could not see my way so clearly to the cause of the loss as I desired, assuming the hay to have been of a good digestible, nutritious character, and the ewes to have had a run out daily. I, therefore, wrote to the owner for further particulars, which he was kind enough to give me. He said that the ewes had thrashed hay during November; in December, thrashed hay once a day and rye grass hay once a day; and after that some sainfoin hay. Their time was up about the 21st of January. They were kept through the winter in a kind of double fold, and appear to have lost flesh. I wrote a third time, and particularly enquired as to the state of the dung of these animals. I asked if the dung of the ewes had been observed during the time they seemed to be somewhat failing in health, and whether it was not very dry, hard, and pebble-like. The owner replied that it was so when the ewes were feeding on the so-called thrashed hay. Not being quite clear as to the meaning of this "thrashed hay,"—please observe this:—I took means to ascertain that it consisted of the stalks of thrashed rye-grass. Here, then, at last, I found the groundwork of the loss. You who are practical men know perfectly well that the stalks of rye-grass standing till the seed was thoroughly ripe must not only be highly indigestible but very innutritious,—that, in fact, it could be little more or less than a mass of wood fibre. The only good contained in this grass had been removed by the extraction of the seed, and I am not surprised, nor will it surprise you, that the ewes lost in condition. The state of the dung proves that

they were constipated and suffering from low fever, although neither the master nor shepherd had observed it; and this fever I have no doubt was the cause of the abortions. If used earlier, the sainfoin hay might have done good, but given when the ewes were in a state of fever, it only added fuel to the flame, because sainfoin hay is of itself constipating. Had the owner been, I will not say as wise, but as thoughtful as some of my correspondents have shown themselves in the management of their flocks, when he saw the ewes were not looking so healthy as they should be, he would have had this hay cut into chaff and mixed with good fresh, broad bran, at the rate of 1 bushel of bran and $\frac{1}{2}$ bushel of crushed oats, to 3 or 4 bushels of chaff. If these ewes had been thus fed from the latter part of December, their bowels would probably have been relieved, more vigour given to the system, and most likely the abortions prevented. When I questioned him on this subject, the owner said he had fed on thrashed hay before with no bad effect. This may have been so; but then, perhaps, the ewes had some roots to help them, and the winter was not so continuously wet as the last. Some persons, however, seem to be alarmed at the mere suggestion of trough feeding for ewes. But no danger is to be apprehended from trough feeding if it be properly applied, if sufficient troughs be used and set round by the side of the fold, or the sheep be fed from the troughs before they are put into the fold; and this case, like several others in my returns, shows the loss which is frequently suffered through neglecting their use.

No. 17.—This is a peculiarly "unfortunate case, which I have investigated with some pain, and it ought to come home to us. It relates to a flock of ewes belonging to a gentleman highly respected in our own county. The land of the farm is of light character, and the flock comprised 590 short-wooled ewes, 300 of which were tupped on marshes, and the remainder on new layers. From the time of the rams being taken out, the ewes were folded on mangold tops with some white turnips, and had a run on grass during the day. From Christmas to the time of lambing they were kept on turnips, and also ran out every day. The turnips had farmyard manure in a few instances, but were generally grown with a mixture of one part rape cake, to two parts of two kinds of superphosphate manure. About a week before last Christmas—mark the date!—the shepherd, a sharp, shrewd fellow seeing something he did not like in the appearance of the ewes, suggested to his master to give them two nights on another field of turnips and one night where they were then being folded. About Christmas some mixed cow and rye grass hay chaff was given, but no bran until the 5th of February, when the ewes began to show unmistakable symptoms of doing badly, and then only a small quantity. The first ewe broke out purging on the 13th of January last, and another ewe was killed the same day. On Sunday, the 4th of February, several others commenced purging and on the following day one ewe was found dead in the fold. From this time the ewes fell down more quickly, and were generally taken with purging. As the disease got more hold of them the ewes moved about with greater difficulty and then died. One of their symptoms was a good deal of frothy discharge from the nose and mouth. As you have seen there were 130 cases of abortion, and 166 ewes died. In almost every instance the ewes died from inflammation of the lungs. The abortions commenced soon after the ewes began to do badly, and continued till they reached their full time. Then of the lambs, 340 were lost from their being unhealthy, weakly, and unable to get up after being dropped; and several of the ewes that have recovered have lost their wool, which shows to how great an extent fever must have existed in their system. This case being such an unfortunate one, I desired to investigate the treatment of the flock of ewes on the farm for the previous two years, and to learn the result. Through the openness and candour of the master and the intelligence of the shepherd I have been enabled to do so. In 1875 the turnips were grown with one and a half cwt. of rape cake and three cwt. of superphosphate manure an acre. The ewes had meadow hay and straw chaff when feeding on turnips until after Christmas, 1875, and a very small quantity of bran. They seemed to do pretty well up to this time. They then began to show symptoms of purging, and dimness of sight, which I have so often found to follow constipation of the bowels and fever, and this affection appeared to be extending in the flock. A liberal allowance of the best broad bran was then given, and the ewes had two nights in a limited fold of white turnips, and one night in a limited fold of swedes. After having had the increased and liberal

allowance of bran for a few days, the purging ceased, and the ewes visibly and rapidly improved. I think we may fairly infer that this judicious giving of bran in a liberal way most probably prevented a serious loss. Still, several of the ewes had received a nasty rap, the fever having got into their system, as was shown by those which had been attacked with purging afterwards breaking out full of sores on their lips and gums. The ewes generally did well in lambing, but as many I believe as forty lost their teats, and had to be drafted from the flock. Through the vigorous action taken when they seemed to be going wrong, there were only six deaths of ewes during the lambing of 1878, and this shows that an experienced shepherd and an energetic master may, even at the eleventh hour, avert some of the evils that threaten to come upon a flock. Now, in 1874 the turnips on this farm were grown with rape and cotton cake and were of good quality. The ewes when on the turnips had a liberal allowance of other food, and the result was perhaps the best ever known on the farm. There were no abortions; very few ewes were lost; and 580 ewes reared 804 lambs. Surely a careful consideration of the points brought before your notice by the details of the management of this flock during the last three years will leave behind a moral both for masters and shepherds. Having placed before you the details of the five unsatisfactory cases set forth in the schedule I now proceed to take seven others, which will complete the total number of selected cases.

No. 18.—This is a flock of a gentleman in north-west Norfolk, who stands deservedly high in the esteem of all who know him, and is a capital farmer. The flock consists of 460 Oxford Down ewes. They were tapped on new layers and pasture land, and continued on stubbles and pastures till Christmas. After Christmas they had a few white turnips, with a run on the pastures every day, and a feed of chopped oat straw mixed with sainfoin hay was added daily to their diet, the proportions being one-third hay and two-thirds straw chaff. This feeding was followed for about a month, when swedes were given. The ewes looked well till within a fortnight of lambing, when they began to abort, and continued to do badly to the end of lambing. Change of diet by putting them on Italian rye-grass for a short time daily did no good. Unfortunately the mischief was already done, and it was too late for the change of food to have any marked beneficial effect. There were 70 cases of abortion and 54 ewes died. The swedes were grown with the following manure per acre: 1 cwt. guano; 2 cwt. rape cake; 3 cwt. of bone manure dissolved with sulphuric acid. I cannot help thinking that this is another of the many cases I have received which show that swedes are not healthy food for breeding ewes.

No. 19.—A case of a small flock of short-wooled ewes, also in this county. They were tapped on layers, and afterwards allowed the hoggets on turnips and swedes. Now, probably I shall here find myself at issue with many farmers, but I cannot for the life of me understand how it is men of intelligence and sound judgment will suffer their ewes in the delicate state of pregnancy to become scavengers as it were to the hoggets. I know it is very generally done, but still I cannot help feeling that it is barbarous and wrong. As we have seen, the ewes in this instance were made scavengers. Later on they had white turnips during the day, but still following the hoggets, and fed on swedes at night. The soil is of mixed character, and the roots were grown with the usual superphosphate turnip manure. About the 18th of February the ewes had green turnips thrown to them on the land during the day, and were folded in a fold of swedes at night. They had some straw and hay chaff, but no other dry food. They began to fail about the 30th of February; 65 ewes aborted and 23 died. The bowels became constipated, and there was much fever about them. As I have already referred to the treatment to which the ewes were subjected in being made scavengers to the hoggets, I will make no further observation on this case, but proceed to another.

No. 20.—I now take a flock of 690 half-bred and Wiltshire down ewes in Suffolk. The land is of somewhat light character, and the ewes, which were tapped on rape and turnips, took the ram unusually well. From the time of leaving the ram up to lambing, the ewes were fed on turnips with a run on pasture. The turnips consumed before Christmas had 3 cwt. of superphosphate manure and 2 cwt. of salt per acre. Those fed off after Christmas had 3 cwt. of rape cake and 2 cwt. of salt per acre. From the 1st of October the ewes had 6 bushels of chaff per acre—one-third clover and two-thirds

barley chaff—and from Christmas they had each a $\frac{1}{2}$ lb. of mixed cotton and linseed cake per day. There were 100 cases of abortion, the ewes commencing aborting about three weeks before the beginning of the lambing season. Twelve deaths occurred to the time of lambing, but the number that died during lambing is not stated. The lambs seemed to be unhealthy. There were numerous twins, but in many cases one came alive and the other dead. When from three days to a week old many of the lambs did badly, some being affected with gangrene, and others becoming stiff in their joints. The owner thinks that the turnip tops and the coarse grown grass round some pits was the cause of much of the mischief amongst the ewes. But I should think that two-thirds barley chaff to one-third stover chaff was by no means healthy food. My experience of barley chaff is that it is very indigestible unless assisted by a liberal mixture of bran. A $\frac{1}{2}$ lb. of mixed cotton cake for each sheep daily would not do much towards neutralising the effect of the chaff; and the result might have been different had all the cake been linseed. However, I give you the facts as they came before me; and there can be no doubt, as I have already intimated, that two-thirds of barley chaff, which would of itself be rather more than three-quarters of a peck for each ewe daily, would take a good deal of digesting, and be likely to derange the stomach, and thereby the system generally.

No. 21.—Returning to Norfolk, I take a small flock of 240 black-faced ewes on a mixed soil farm. They were put to the ram on the 1st of October last, and were feeding on grass. They took the ram freely. From the time of leaving the ram to Christmas they were fed on turnips, with a run on grass. After Christmas the ewes were kept wholly on turnips, the turnips being grown with superphosphate manure. They had no hay until they gave undoubted signs of being out of health, and then twelve stones per day were given to the whole flock. When two-thirds gone in lamb, 80 cases of abortion took place, and 40 ewes died from fever and inflammation of the bowels. Here, again, we find the owners attempting to remedy the evil after the mischief was done. How much better it would have been for him to have taken to the hay earlier, for in that case I have little doubt that he would not have experienced such loss.

No. 22.—That we may first get the experience of one county and then of another, we will take this case in Gloucestershire. It relates to a flock of 550 Cotswold ewes, on a farm of stone brash land. The ewes were put to the ram at the end of September, and fed on new layers and old grass. From the time the rams were taken from them, up to Christmas, the ewes were fed on common turnips with a small allowance of hay daily. From Christmas to the time of lambing they were put on swedes, and had an allowance of long hay. The turnips and swedes were grown with from three to four cwt. of superphosphate manure per acre. There were 100 cases of abortion, chiefly amongst the older ewes, and 14 ewes died. The abortions continued for a month. You will have observed that the ewes had only hay in addition to the swedes. Had the hay been cut into chaff and mixed with a fair proportion of fresh broad bran, I think the ewes would have done better, whilst, as it was, you will all say they could not have done much worse than they did.

No. 23.—This is a case of 1,028 Hampshire ewes on a large light farm in this county. Tapped on old and new layers and heath land, and during the latter part of the time fed on turnips, the ewes were afterwards kept on turnips and heath up to the time of lambing. The turnips were grown with superphosphate turnip manure. No other food than turnips and what was picked up on the heath was given to the ewes, except a little hay chaff and some cake, in a few instances, during lambing, the cake being served apparently in homoeopathic doses. There were 70 cases of abortion, mostly in February, and from the 11th of October to the 1st of February 28 ewes died. The owner remarks that the sheep were well one day and dead the next, and that he believes it was from eating the bottoms of the turnips, on which the manure the turnips were grown, with was distinctly visible. I fear, however, that the sheep, although unobserved, had been ailing for some time, for when speaking of the abortions the owner says:—"I cannot say what caused the abortions, but the fever in the ewes was produced by having too many turnips and not sufficient other food." What a great pity for his pocket that this gentleman did not make his discovery earlier, for the fever with which sheep are affected is not a disease that comes

upon them suddenly, but it gradually undermines the system, and only too frequently no attempt is made to check it until the crisis has come. An experienced eye will generally detect its presence much earlier than those who do not understand its progress, and hence it is that an intelligent shepherd is worth almost his weight in gold. The lambs in this case dropped thin and poor, many being scold or stiff, and the ewes had little or no milk, which is one of the effects of fever in the animal.

No. 21.—My last selected case is also from the county of Norfolk. It represents a flock of 270 short-woolled ewes, on a farm of mixed and light soil. The ewes were tupped on layers and heath, and when the rams were taken from them they were put on turnips, with a run on the heath. Turnips grown with superphosphate manure and some straw chaff constituted their diet. The ewes showed symptoms of going wrong about the 14th February last. They were much constipated in the bowels, and some hay and straw chaff, with malt culms mixed with it, was tried, but unfortunately the change was too late to counteract the evil done by the turnips, and whilst 100 cases of abortion occurred, 42 ewes died, the symptoms being those of inflammation of the lungs.

SINGULAR CASE OF "ROT."—Before I pass on further I must call your attention to a singular case of "rot." A return has been made to me that in a flock of 630 black-faced ewes on a light-land farm in Norfolk, about 100 ewes have died from what is said to be "rot." All these ewes were in lamb, and aborted. It is supposed that they were affected when purchased last autumn. I can give you no further information upon it. The case is one that I certainly never heard of before, and for the owner's sake I am very sorry to have heard of it now—and all I can say is that, whilst deeply regretting the circumstance, I hope when gentlemen go to market next autumn they will keep their eyes open, and, if possible, avoid "rotten" sheep.

A WORD FOR THE SHEPHERDS.—I would also observe here that of the hundreds of persons who answered my circular, there were only four or five who complained of their shepherds. They generally spoke well of them in answering the question put to them as to whether they had reason to believe their shepherds had properly cared for and managed the sheep. This is most satisfactory to me, who have always found shepherds, as a class, to be devoted to their work, and desirous of doing the best in their power for the sheep placed under their charge. There are exceptions, no doubt, but we must not blame a large body of good men for the faults of a few. In my opinion no class of men connected with agriculture have more in their hands for good or evil than shepherds. A good shepherd is a treasure, and a bad one little better than a curse. I would therefore say, if you have got a man who is steady, intelligent, painstaking, and careful, take care of him, and, on the other hand, if you have a drunken, lazy, gossiping, stupid, careless fellow, get rid of him.

GENERAL REVIEW AND CONCLUSIONS.—Well, gentlemen, you are now in possession of both an abstract and the details of my representative cases. I ask you now to join me in taking a general review of the questions presented to us, with the object, if possible, of arriving at some definite conclusion. We have seen how numerous and serious have been the instances of disease and death throughout the whole country. How great a loss do they imply in money and in food? And such a loss farmers are now ill-able to bear. Two or three bad seasons for corn growing, with low and unremunerative prices, make the matter of the breeding, rearing, and feeding of sheep and cattle one of vital importance to the profits of a farm. For some years flockmasters have been more or less subject to severe losses in their flocks, and the bitter disappointment which they have caused have not been lightened by the consciousness of a diminishing balance at the bank. Now, the question arises—Is it possible to prevent some of these losses? I trust the result of my inquiries may be of some assistance on this point. "Knowledge" is said to be "power." I believe it to be so, more especially when it is of a practical and reliable nature, and when properly applied. A most careful analysis of the returns, in making which I have had some able assistance, shows that sheep fed on turnips now are not so healthy as sheep were when fed on turnips some years ago. As you will have imagined, and as it needs no philosopher to tell you, ewes fed on grass are much more healthy than when fed on turnips. Let us take two cases for comparison. A flock of 600 Kent ewes in the Isle of Sheppey, Kent, were fed

all the year on grass. They produced about 800 strong lambs, with the loss of only six ewes and there was not a single case of abortion. A flock 1,000 cross-bred ewes in a distant county were fed from the time of leaving the ram wholly on turnips, not having hay, chaff, or other dry food. The loss was so great, both from abortions and the death of ewes from lambing, that the numbers were withheld from me, and only the admission made that it was very great. The turnips in this case were grown with the usual artificial turnip manure. Now, can we account for the great change that has taken place of late years in regard to the quality of turnips and the health of sheep compared with what they were in former years? I always like to hear the opinions of other persons as well as state my own, more especially when they are given by practical and competent men, and you shall hear some such opinions. I wrote to a man in West Suffolk, who stands pre-eminently high as a practical agriculturist, who was most successful in the management of his flock—a man with sound judgment and clear perception—who knew when to do a thing and how to do it, and who has been fortunate enough to retire from business with a competence which I trust he will long live to enjoy. In the reply I have received from him, to which I invite your deepest attention, and for the reading of which I will make no excuse, he says—

"I have frequently heard my late father speak of the difference of the treatment of a flock of ewes in the early and latter part of his long life (ninety year-). In his boyhood comparatively few roots were grown. The light lands were farmed on the six or seven course shift, and but little wheat was grown. Rye was the principal winter corn crop. The layers were allowed to lie two, three, or four years. Under this system there was a long interval between turnips being grown upon the same land, and consequently it was more kind for that root, and did not require so much manure. No manure was grown at that time, and but few ewes, and the latter on that part of the land that had been mucked the previous year for wheat, when an additional light coat of farm-yard manure, or four hundred weight of rape-cake was used. Where the land had been sheep-folded for rye, nothing was done or required for common turnips. Where there had not been anything done for the rye crop, the sheep-fold was got over all the land that could be done in time for sowing the turnips, which was not finished until the last week in July. At that time there was a great deal of heath and warren land which has since been broken up. With a run upon the heath and the old layers, with a little long hay hung round the farze-bushes in sharp weather, the ewes were kept off turnips until within a few weeks of lambing. Heavy losses from abortion were at that time almost unknown. From my own experience (extending over upwards of 50 years) I long since came to the conclusion that superphosphate manures extensively used for turnips were injurious to a flock of breeding ewes. When first introduced I bought ground bones, dissolved them with sulphuric acid, with which I mixed a quantity of burnt earth, and used the mixture freely over my root crop for two seasons. I got tired of the trouble of mixing my own, and bought it prepared. I soon found that my ewes did not do so well as formerly. They had more cases of abortion and weak and sickly lambs cast than when I did less for my root crop. I changed my system. I sowed more land with rye to fold off in the spring, and gave the ewes some other food with it. Land so treated I found very kind for turnips without any further dressing. I used rape cake upon what more land I required for turnips for the ewes. I am of opinion that we should do better if instead of going to a heavy expense to grow turnips for breeding ewes, we spent part of the money in purchasing good sound nourishing food for them. After all the pains I could take (or did take) I have occasionally had what we call "bad luck" with my ewes. I am inclined to think that sometimes it was from the want of forethought and due attention. A few years since I had a flock of 600 ewes (upon an off-hand farm) feeding off a 30 acre field of nice useful sheep turnips, all, except about four acres, in a proper state of ripeness for feeding. The ewes did well upon the twenty-six acres of ripe turnips. The four acres at one corner of the field were after rye and tares mown off. The four acres were heavily dressed with artificial manure, and the turnips sown much later than those on the other part of the field. The weather was fine and open; the turnips grew rapidly, and the tops were very succulent. When the larger part of the field was finished, I said to the shepherd, I am rather afraid of these young turnips for

the ewes. He answered, Well, sir, so should I be if there were many of them; but I think those few can't do any harm, and we may as well finish the field 'now the hurdles are here. The next time I was over and saw the shepherd he said, We have done a pretty job by feeding those young turnips; the ewes have been altering for the worse ever since they were on them. This was about six or seven weeks before lambing time. I went to look at the ewes. I found many of them wet and stained behind; they had lost the bright look in the countenance, and had a languid sort of walk, with the head rather drooping. About three score cast their lambs, and many more produced sickly ones. If time and space would allow me I could mention other instances that have come to my knowledge where a few days mismanagement was the cause of much mischief. If my experience is worth anything it amounts to this: A flock of breeding ewes require, from one year's end to the other, constant regular attention; to be kept in as uniform condition as circumstances will permit; to be fed upon sound, healthy food at the time the tups are with them, and to have a portion of dry food all through the winter months. Don't spare the pocket in wet and severe weather; keep their condition up so that you have not to force them on just before the lambing time, and never give them a sudden large increase of succulent food."

I think, gentlemen, you will admit that to be a sound, practical letter. Now, I take a letter from the son of a gentleman long since dead, who was also a most successful sheep breeder in this county. Being anxious to know how the deceased managed his ewes, I wrote to his son, a highly-intelligent farmer in West Norfolk, and he replies:—

"It is very evident that sheep are not so healthy as they used to be. One reason is, I think, the land being farmed more highly for turnips, and I have repeatedly remarked that we lose more sheep after a heavy crop of turnips. I do not think the artificial manure of itself is the cause, beyond forcing a turnip into a bad quality, which frequently causes as great loss just at the lambing time. I well remember, forty years since, my father used to plough-in just after harvest a certain number of acres of wheat stubble for rye for his flock of ewes in the spring of the following year, when it was folded off for turnips. He never mucked or gave any other kind of manure where his ewes went. He used to grow good nice healthy lambs, and had very little loss amongst his ewes. Foot-and-mouth disease was not known then, nor fever in sheep, and he seldom had a ewe cast her lamb."

Those were happy times, and we want a return of them. Well, I like to get at the opinion of all classes, and, therefore, acting under the advice of my practical friend, Mr. T. Gayford, of Wrettham, I wrote to an old shepherd who has for years and years been well known as a shrewd and clever man at his business, and who, I am happy to see, has come a considerable distance to hear my lecture, reminding me of an old huntsman who, having retired from business, but hearing there is to be a meet of hounds in the neighbourhood in which he lives, is bound to get on to something, and go and see the throw-off. Here is what he says:—

"I acknowledge your letter, and shall be pleased if my experience will be of use to you. Like John Day, I am a pedigree shepherd, which I can trace for 200 years, without the line being broken. My experience extends over 53 years, 49 of which I have been with large flocks on various soils, but experience is not of much account with some of the modern farmers, who, for the sake of lower wages, trust their flocks to young men, and thereby often sustain heavy losses while the shepherd is gaining his experience. I consider a sober, careful, and experienced man should be thought worthy of trust by his master, and allowed to exercise his judgement in the management of the flock under his care, of course taking counsel with his master, and then things would work more pleasantly and fewer losses would occur. In some cases losses are supposed to arise from unsuitable soils. This may be so, but many heavy losses do arise through too much turnip-feeding, for turnips are foreign to the nature of sheep; but if carefully used with some hay or other good dry food, and a certain amount of gentle exercise, they will do no harm. In my early days large losses amongst sheep and lambs were unknown, except in cases of real starvation. Both swedes and common turnips were then grown with farmyard manure or rape cake, and were not sown so early as they now are. There was not so much mildew amongst swedes then, and if we got 20 per cent. less in quantity, we got 100 per cent.

more quality; and sheep were more healthy when feeding on such roots than when feeding on the spongy, leathery-looking things grown now-a-days. Some years ago I had charge of twenty score long-woolled ewes for eleven years, and never lost more than four or five in any one year, and in two years of the time I was with this flock we did not lose one ewe, and had no warps. My master was a good feeder, and gave his flock but few roots before they lambed. I set my face dead against swedes for ewes, except after a severe frost, and then to be given in moderation. I enter the strongest protest against either white turnips or swedes grown with superphosphate manures. Let the advocates of these manures say what they like in their favour, it will never cause me to alter my opinion; for I have seen too much mischief done where such manures have been used. Turnips on which ewes are fed should be grown with farmyard manure or rape cake. I never knew general good luck in a very mild winter. The turnips keep on growing and are full of sour sap, which a severe frost would deprive them of. Again, farmers are apt to say, 'There are plenty of turnips; let the ewes have what they can eat; I can't spare them any hay,'—and so, although the sheep may be looking tolerably well to the eye, they are getting that into their system which is the forerunner of many of the heavy losses of which we hear now-a-days. I unhesitatingly say that a great many losses amongst ewes and lambs are caused by mismanagement and by not giving hay, bran, and similar food to counteract the effect of turnip-feeding, or to put it plainly, losing a pound to avoid spending a shilling."

I need not say I consider this an outspoke letter. Yes, and I honour the man who wrote it, because there is a great deal of truth in it. In verification of the old shepherd's letter I will give you a case in point. A tenant on a small light-land farm in this county had 180 ewes, which he fed liberally when he entered on the farm a few years ago; many good and healthy lambs were bred, and the ewes did well. Gradually he drifted into the plan of giving the ewes little food but turnips, and what they could get on the heath belonging to the farm; and then commenced what is commonly called "bad luck." Last year, I am given to understand, he lost several ewes; that there were a good many cases of abortion and dead lambs, and but very few lambs were reared. The tenant left the farm last Michaelmas and perhaps you will say it was time he did. The new tenant has also a flock of 180 ewes. He gave them, from the time of putting them to the ram, a limited daily allowance of turnips, and a fair supply of hay chaff, with which bran was mixed at the rate of one bushel to five of chaff. The 180 ewes have produced 241 healthy lambs, with the loss of but 3 ewes, and there was no instance of abortion. It may probably be said that this so-called "good luck" was from the ewes being fresh on the farm; but I have been assured that several of the ewes have been on the farm for two or three years, and were bought at the previous tenant's sale. I have several letters of a similar character, but I will not further take up your time by reading them. Doubtless, in the main, the conclusions arrived at in those letters are correct. Our system of sheep-feeding now is different from what it used to be, more especially in Norfolk. I am quite aware that various circumstances have produced this change of system, but we must meet those circumstances, and endeavour, as far as possible, to manage our sheep in a way most likely to obviate these losses. We must, however, take a broad view of the matter. Grass, no doubt, is the natural and most healthy food for ewes; but then it is impossible for flock-masters, as a rule, to feed wholly on it. Recourse must be had generally to turnips, but more especially in Norfolk and the eastern counties. How, then, are we to grow and use turnips with the smallest amount of harm and the greatest amount of good? There is no denying the fact that the numerous and valuable returns which I have received distinctly show that turnips grown with superphosphate manure are not so healthy for breeding ewes as those grown without it. I will give you one case on this point: A Norfolk farmer fed his small flock of brown-faced ewes during the winter of 1875-76 on turnips grown with superphosphate manure, and had 60 cases of abortion. During the last winter and spring the same flock of ewes were fed on turnips grown without superphosphate, and there were no abortions, but the ewes have done as well this year as they did badly last, although the season was so unfavourable for breeding flocks in general. Both years the ewes had the same description of other food. Doubtless the character of the soil has to do with the quality

of the roofs where the so-called turnip manures are used, and I also find instances in which these superphosphate manures have been moderately and judiciously used, and any ill-effect neutralised by careful feeding with other kinds of food and by good management. The practical knowledge of the flock-master should be brought to bear in deciding when is the proper time to supplement the turnip food with dry and more nutritious diet. I will give you two cases illustrative of this point: A gentleman in this county has a flock of 350 Hampshire down and half-bred ewes on a mixed-soil farm. They were fed on turnips grown with 3 cwt. of dissolved bones and 2 cwt. of superphosphate manure per acre; and they had a good allowance of dry food, including cut hay and $\frac{1}{2}$ lb. of linseed cake per day. There were only two cases of abortion and three or four deaths of ewes. So strongly did the owner of these sheep feel the importance of calling my attention to the fact that he had "scotched" the serpent, as it were, by neutralising any ill-effect from the superphosphate manure, that he scored his remarks upon it with double lines. It will, I believe, be generally felt that by the turnip food being supplemented by cut hay and linseed cake, the strength of the ewes was kept up, so that they not only resisted any ill-effect the turnips might have had, but also that which might have arisen from the long continued wet weather of the past winter. The other case is that of a gentleman who farms in this neighbourhood on mixed and light soil, and has 320 as good half-bred ewes as any man need desire to have. His ewes were fed on turnips grown with a reasonable dressing of superphosphate manure, and from the time they left the ram until lambing they went out on grass up to Christmas, and also had a judicious allowance of hay-chaff with a liberal admixture of bran. The good effect of the bran is to be noted in the fact that there was not a case of abortion, and no more than three or four ewes died. It will be seen from the two cases just quoted that by care and judicious feeding with other suitable food, the ewes when on turnips may be preserved from the ill consequences which otherwise result. If, I ask, good management averted loss in these cases, why should it not do so in many others which yearly come under our notice? I think it must be clear to any person who has followed my remarks in giving details of cases, that swedes are proved to be unhealthy food for breeding ewes. I might have adduced many other cases from my returns confirmatory of this. In the few instances where the ewes have done well when feeding on swedes the daily supply has been limited, and there has almost invariably been an allowance of other food as well. My experience has shown me that swedes are constipating, and heating, and liable to disorder the system of ewes, and to produce low fever; and shepherds inform me that ewes fed on them rarely have much milk. You must yourselves know whether this be so. Why, it will be asked, have sheep been more unhealthy this year than in former years when, just the same as now, they were fed on turnips? I think the reason is not very difficult to find. The past winter being so very open, the turnips were, more or less, always in a state of slow growth, whilst those grown with superphosphate manure were of a somewhat inferior quality, being spongy and indigestible, and ewes fed on indigestible and innutritious roots, without a fair supply of dry, wholesome, and invigorating food, slowly, but surely, although perhaps imperceptibly to the flockmaster, got out of health, and losing strength, gradually drift into that miserable and unfortunate low fever to which they are so peculiarly liable. Why, gentlemen, if any of us were feeding on pork, which is not by any means easy of digestion, and got out of health and sent for the doctor, the first thing he would do would be to cut off the pork; but suppose we took the doctor's medicine and still continued to eat the pork, is it not probable that the effect would be a serious illness? That which holds good of us will apply to our ewes, and we should not treat our flocks less kindly and considerately than we would treat ourselves. In their weakened state the ewes were unable to resist the effect of the continuous wet weather of the past winter, their coats being scarcely ever dry, and the wet acting on a debilitated system produced inflammation of the lungs or the other diseases from which so many hundreds of ewes have died. Six persons go out on a very inclement day. Five of them are strong, robust, and healthy, and the sixth is delicate, having been out of health for some time. They all get wet, and remain for the day in their wet clothes. The five strong and healthy persons are enabled by sheer strength to resist the effects

of the wet and cold, but the sixth, through delicacy of constitution, succumbs and dies either from slow consumption or from rapid inflammation of the lungs. So it has been with the sheep. Then, again, from the turnips during the past mild winter having been so full of sap and containing such very little goodness, ewes were rendered unhealthy, and, being weakened by feeding on indigestible and innutritious food, were peculiarly liable to abortion. There is, I think, no denying the fact that the blood derived from innutritious food taken into the stomach of a ewe is very poor in quality compared with that which is formed from sound, healthy food. In such a case the organs which ought to be supported by good and healthy blood are supplied with blood that is little better than water, and, becoming debilitated, their natural functions are impaired and weakened. The lamb in the womb of course derives its support through the blood of its mother. If that blood is weak, impure, and wanting in sustaining power, the lamb must suffer, lose vitality, and become nothing more nor less than an offending body, to be eventually expelled from the womb. Hence the sad number of abortions which my returns unfortunately disclose. Not only is the lamb thus lost, but too frequently the mother is sacrificed too. On the other hand, where ewes have been fed with a fair allowance of good, wholesome, strength-giving food, supplementing turnips, notwithstanding the unfavourableness of the season, they have remained strong and healthy, and their offspring have been strong and healthy also. These are the conclusions at which I have arrived after the most careful consideration, with the advice and assistance of an eminent physician, and the kind help of Mr. Jas. Worm, the veterinary surgeon of this place, of whose scientific and practical knowledge of his profession I have a high opinion. From the evidence I have been enabled to lay before you I believe that the verdict of a large majority of the thinking and practical farmers and experienced shepherds in this room, and throughout the country, will be this—that if we make it a rule to flush our ewes by stimulating food during the tugging season, to avoid feeding on swedes as much as possible, to limit the supply of other roots so far as the circumstances will permit, to give a fairly liberal allowance of digestible, nutritious, and health-preserving dry food, and to run the ewes out on grass as much as possible (taking care never to overfatigue them) before lambing, there will in future be far fewer cases of abortion and death amongst ewes than we have now to deplore, and many more strong and healthy lambs will be reared than at present. One other point is this: The ewes lost during lambing would appear from my returns to be greatest where short-woolled ewes have been put to long-woolled rams. Let it be understood that I by no possible means wish to throw doubt on the many advantages arising from this cross-breeding, for were I a tenant-farmer the chances are that I should adopt the same principle. I merely wish to bring before you a faithful statement of the facts which the returns clearly establish. The evidence, I say, is unquestionable that greater mortality attends lambing where short-woolled ewes are put to large-boned, long-woolled rams than where the ewes breed after their own kind. Nature never intended a short-woolled ewe to breed from a long-woolled ram, and consequently their parts are not adapted to the unnatural strain put upon them. If Nature's laws be reversed those reversing them must be willing to accept the consequences. Where cross-bred ewes are served by Oxford Down rams the loss of ewes has been less than in the case of the short-woolled ewes served by the long-woolled rams, and I presume the reason is that the half-bred ewes having their parts more fully developed from the cross are the better adapted to perform the functions required of them. There are other matters of much interest that I might have brought before you, but the length to which my lecture has extended, although far from having exhausted the subject, must I fear have had an exhausting effect upon your patience. I will not trespass further upon it. Thanking you for the kindness with which you have listened to me, I will only briefly add: If the facts brought out by my inquiries, and made public by this lecture, throw any light—as I believe they do—upon this most important question—if they become beacons in the future warning any number of flockmasters of England against the rocks surrounding the management and feeding of their flocks, if they be applied and result—as I confidently believe their application would result—in the more successful and therefore the more profitable breeding and rearing of sheep, I shall have the highest possible reward for any labour and pains to which

I have been put in the consciousness of having rendered some trifling service to the agricultural and public interest of this great sheep-producing and meat-consuming country—a country which has hitherto always held, and we trust will ever hold, its own in the natural and peaceful pursuits of commerce and agriculture.

Mr. T. GAYFORD, in moving a cordial and hearty vote of thanks to Mr. Woods, said there could be but one opinion as to the lecture, which, if published, would form a manual of reference and information of great assistance and value to flockmasters. Mr. Woods had evidently bestowed great thought and labour upon the subject, and they were deeply indebted to him for the pains and trouble he had voluntarily undertaken on their behalf; whilst his opinions as the manager of one of

the most successful flocks England had ever had, were entitled to the deepest attention.

Mr. RIGGALL, in seconding the motion, complimented Mr. Woods on his analytical acumen in dealing with his voluminous returns.

The CHAIRMAN, in putting the motion, which was adopted with enthusiasm, expressed his concurrence in the observations of the mover and seconder.

Mr. WOODS having briefly acknowledged the vote,

Mr. E. FARRER expressed a very earnest hope that the lecture would be published *in extenso*, and that certain matter which Mr. Woods had been compelled to omit for want of time would also be given.

Thanks to the Chairman terminated the proceedings.

AGRICULTURAL SOCIETIES.

ROYAL CORNWALL.

MEETING AT CAMBORNE.

[Abridged from *The West Briton*.]

The Show deserved to be the greatest success on the records of the Society. It was in almost every way the largest and best Exhibition it has ever had.

The Exhibition was opened on Tuesday, June 12. There had been a heavy thunderstorm on Monday night, and much rain had fallen, which made the ground fresher and the roads less dusty in the morning. The early part of Tuesday was gloomy, but about noon the weather greatly improved, and the latter part of the day was fine and warm. The judging, which constituted the special business of the day, was, for the most part, over in good time; the horses, some of which had to be put through their jumping paces, being, of course, the last in hand. Unusual interest appeared to be manifested in the horse competition. In the implement department there was a good deal of machinery in motion. The attendance on Tuesday approached 5,000. Numerically this has been exceeded by the first days at St. Austell and at Truro, in 1875; but, as the admission in the early part of the day was 2s., the receipts of the day are exceeded by those of the 1875 first day at Truro only. Of cattle there were 189 entries, and of these the Devons had 28, while the Shorthorns were represented by 48; Herefords 24; Guernseys and Jerseys 31 entries. Thanks to the prizes given by the Camborne Local Committee there were eight entries of cottagers' cows. The two old Devon bulls competing were Mr. Rosewarne's (Godolphin) "Master Plinton" and Vicount Falmouth's bull, "The Only Jones." In the second class, bulls about two and not exceeding 3 years old, Lord Falmouth had his own way with two animals, "Romaney Rye" and "Sirloin." In class 3 bulls not exceeding three years old, there was a fair competition, Mr. John Menhennick, of Wadebridge, Mr. Julian, of Creed, and Mr. G. L. Bassett, of Tehidy, competing against Lord Falmouth. In the yearlings there were the same competitors, with this difference, that Lord Falmouth had two entries instead of one only in the previous class. In cows and heifers there was a moderate competition. The two older bulls sent by Lord Falmouth were splendid animals, and were considered by the judges to be by far the most perfect animals in the Show, and they would have awarded either of them the special prize for the best bull, but Lord Falmouth, it was known, would refuse to receive his own prize, and a third best had to be found to bestow it upon, and it was given to Mr. Hawken's Hereford bull, "King Coffee," a regular mountain of flesh. In the yearling bulls Mr. Julian, Creed, carried off the premier honour, and Lord Falmouth took the other two prizes. He was first in the two-year-olds. In cows he did not compete, and Mr. R. Corner, Torweston, was first-

In heifers not exceeding three years old Mr. Julian was again honoured with a first, and Mr. Corner was first in two-year-olds.

The Shorthorns, it may be truly said, were a grand class, and the bulk of the prizes were carried off by Messrs. Hosken and Son, of Hayle, and their chief strength was in cows and heifers. They did not show at all in bulls above three years old, but they showed a couple of bulls above two years, and got first with "Sir Frederick." They were first also in the next class, bulls not exceeding two years old. In yearling bulls Mr. S. T. Tregaskia, St. Iseey, beat them, but they came in second. In Shorthorn cows, exceeding three years old, in calf or in milk, they took all three prizes, and they did the same in shorthorn heifers in calf or in milk, and the same in heifers not exceeding two years old, and they took first and second in yearling heifers, while a third heifer shown by them was highly commended. In addition to these prizes Messrs Hosken and Son were awarded the special prize given by Lord Falmouth for the best cow in the yard, and in some cases where they were beaten it was by animals out of their own herd.

The Herefords were also a very fine class, Mr. Hawken's bull, which got the first prize in "bulls above two years old," was quite a picture, and could scarcely carry the fat that was on him. Mr. W. R. Grose, St. Kew, was first in bulls not exceeding two years old, Mr. John Baron, Lanivet, coming second. In yearling bulls, in cows exceeding three years, and in heifers in calf or in milk not exceeding three years old, and in the two-year-old class, Mr. John Paul, Roan, carried off the premier honours; so that he carried off four firsts. In yearling heifers Mr. C. J. Searle, St. Ewe, had first. Altogether they were a good useful lot of animals, and proved how this breed has been advancing in favour in the county.

Of Channel Islands cattle there was a very good show.

For the prizes given by the Camborne Local Committee for cottagers' cows there was a fair competition, and the first prize was taken by Mr. J. Trevillion, Roekadinnick.

There was an unusually large show of sheep, and the judges must have had great difficulty in awarding the prizes, seeing that they took nearly the whole of the day to accomplish their task.

The show of horses, as we have previously intimated, was the largest and best the Society has ever had, but it was noticeable that the quality lay with the young animals, indicating at once the improvement which is taking place in the breed. This was especially so with the agricultural class. In stallions the North Cornwall Stud Co.'s "Bobby Burns" again won the blue ribbon, Mr. H. Laity, of Crowan, taking the scarlet with "British Yeoman," which had many admirers, whilst Messrs Charles and Tremaine were third with "King of the County." The first prize mare was a Devonshire one, and took the same position at Tavistock. The prize given by the

Local Committee for agricultural mares, the property of small farmers, resulted in a tolerably good competition. The agricultural geldings' and fillies' classes were well filled. Six pairs of agricultural horses, the property of tenant-farmers, competed for the special prizes given by Mr. W. L. S. Trelawny. The thoroughbred stallions only mustered three, and the first prize went to Colonel Ballard of South South; the second to Mr. Henry Laity, of Crowan. The third prize was withheld, though one of the Judges did say that he was ready to award it on condition that the third animal would be shown next year as a gelding. The hack and hunter classes brought a very wide representation—Mr. West, Wadebridge; Mr. Trencor, Newlyn; Mr. Lack, Cornelly; Mr. Cardell, St. Columb; Mr. Tyacke, Merthen; Mr. Whiteford, Eadellon; Mr. Guy, Eadellon; Mr. Tremaine, Treverie; and Messrs Yeo were among the leading winners. The best class was that of 1875, the whole of which was commended. Of cobs there was an unusually good lot; but the ponies made a very small, and by no means meritorious master, though Mr. Polkinghorne was first with a clever little animal, and Mr. Brydges Williams made a capital second. There was an excellent lot of pigs, there being forty-nine pens.

PRIZE LIST.

JUDGES.—DEVONS and HEREFORDS.—Mr. Evans, Swanston Court, Leominster; Mr. S. P. Newberry, Plympton (in the place of Mr. A. Smith, dangerously wounded by the fall of the bridge at Bath).—**SHORTHORNS.**—Mr. Barnett, Kingscote, and Mr. Eustice Elliott.—**SUSSEX.**—Mr. Hutchinson, Manor House, Catterick; Mr. Dudding, Panton House, Wragby; Mr. Wroth, Coombe, Bigbury.—**JERSEYS and GUERNSEYS.**—Colonel Gilbert, Bodmin; Mr. Michell, Glyn, Bodmin.—**Pigs.**—Mr. Whitford, St Erme; Mr. Vivian, St. Kew.—**HACKS and HUNTERS.**—Mr. J. B. Booth, Killerby Hall, Catterick; Mr. Jeffry Mitchellmore, Totnes.—**AGRICULTURAL HORSES.**—Mr. C. M. Biddell, Playford, Ipswich; Mr. G. Elliott, Swilley, Plymouth.—**IMPLEMENT.**—Mr. John Stephens, Probus; Mr. G. Lobb, Lawhitton.

CHAMPION PRIZES.

Best bull in yard.—Mr. Hawken.
Best cow.—Messrs. Hosken.
Best ram.—Mr. W. Tremaine.
Best pen of ewes.—Mr. Corner.
Best pen of pigs.—Messrs. Russell.
These prizes were given by Lord Falmouth.
All first prize animals bred by exhibitors, except otherwise stated.

DEVONS.

Bulls, exceeding three years old.—First prize, Viscount Falmouth, Tregothnan (The Only Jones); second ditto, Mr. Rosewarne, Godolphin (Master Flitton).
Bulls, between two and three years old.—First prize, Viscount Falmouth (Sirloin); second ditto (Romaney Rye).
Bulls, not exceeding two years.—First prize, Viscount Falmouth; second ditto, Mr. Julian, Creed (Brilliant); third ditto, G. L. Basset, Tehidy.
Devon bulls, not exceeding twelve months old.—First prize, Mr. Julian (Favourite); second and third ditto, Viscount Falmouth.
Devon cows, exceeding three years old, in calf or in milk.—First ditto, Mr. R. Corner, Torweston (Cherry); second ditto, Mr. Perry, Alder, Lew Down (Dairymaid); third, Mr. Julian (Famous).
Devon heifers, in calf or in milk, not exceeding three years old.—First ditto, Mr. Julian (Fancy); second ditto, Mr. Corner, Torweston, Williton (Princess); third ditto, Mr. Meahennick, Wadebridge (Marie).
Devon heifers not exceeding two years old.—First prize, Mr. Corner (Duchess); second ditto, J. Meahennick (Queen Mab); third ditto (Albana).

SHORTHORNS.

Bulls above three years old.—First prize, Mr. Chapman Trewithian, Gerrans (Bismarck); second, G. Williams and W. Tremaine, Ruon (Guy Fawkes); third, Mr. Whitford, Trehane, St. Erme (General).
Bulls above two and not exceeding three years old.—First prize, Hosken and Son, Hayle (Sir Frederick); second, Mr. Mitchell, Ladock (Sir George); third, A. Rendle, Stithians.

Bulls not exceeding two years old.—First prize, Hosken and Son (Red Duke); second, W. Tremaine, Philteigh (Clarence); third, W. and A. Bennet, Camborne (Wild Eyes).

Bulls not exceeding twelve months old.—First prize, S. T. Tregaskis, St. Ivey (Sultan); second, Hosken and Son (Napoleo); third, W. Tremaine (Baron Clarence).

Cows exceeding three years old, in calf or in milk.—First prize, Hosken and Son (Alexandria); second, Hosken and Son (Countess of Oxford 3rd); third, Hosken and Son (Alberta).

Heifers, in calf or in milk, not exceeding three years old.—First prize, Hosken and Son (Carnation 4th); second, Hosken and Son (Kathleen 4th); third, Hosken and Son (Duchess of Towneley 2nd).

Heifers not exceeding two years old.—First prize, Hosken and Son (Miss Ada 8th); second, Hosken and Son (Lady Oxford 3rd); third, Hosken and Son (Laura 3rd).

Heifers not exceeding one-year-old.—First prize, Hosken and Son (Rose of Oxford 2nd); second, Hosken and Son (Kate 7th); third, S. T. Tregaskis (Queen of the Meadow).

HEREFORDS.

Bulls above two years old.—First prize, Mr. Hawken, St. Breward (King Koffee); second, Mr. Best, Lanteglos (Bedford 2nd).

Bulls not exceeding two years old.—First prize, W. Grose (St. Kew); second, J. Baron (Lanivet); third, C. J. Searle, St. Ewe (Sir Richard).

Bulls not exceeding one-year-old.—First prize, J. Paul, Ruon; second, R. Olver, Treacow, Bodmin.

Cows exceeding three years old, in calf, or in milk.—First prize, J. Paul (Daisy); second, W. R. Grose (Nelly).

Heifers in calf or in milk, not exceeding three years old.—First prize, J. Paul (Daisy); second, C. J. Searle (Dainty).

Heifers not exceeding two years old.—First prize, J. Paul (Lily 2nd); second, W. R. Grose.

Heifers not exceeding one-year-old.—First prize, C. J. Searle (Duchess); second, W. R. Grose.

GUERNSEYS.

Bulls.—First prize, T. D. Eva, Troon; second, T. D. Eva. Cows exceeding three years old, in calf or in milk.—Prize, T. D. Eva (Cowslip).

Heifers not exceeding three years old.—First prize, Mr. Renele, Catel Farm, Guernsey (Barmaid); second and third R. Trevithick, Hayle.

JERSEYS.

Bulls.—First prize, R. Hockin, Sancreed (Sir Charlie); second, A. Edmonds, Camborne.

Cows exceeding three years old, in calf or in milk.—First prize, R. Hockin (Beauty); second, W. Penrose, Helston (Diana); third, J. L. Peter, Redruth (Fawn).

Heifers not exceeding three years old.—First prize, Mr. Lark, Cornelly (Dairymaid); second, C. Hockin, Camborne; third, R. Hockin (Sella).

COTTAGERS' COWS.

Cows.—First prize, J. Trevillion, Reaskinnick, Camborne; second, T. Pendrey, Treholland, Camborne; third, Mrs. E. Rickard, Boleunow, Camborne.

SHEEP.

LEICESTERS.

Yearling rams.—First prize, J. Rosewarne, Nanspauke, Hayle; second, W. Tremaine; third, J. Rosewarne.

Rams of any other age.—First prize, W. Tremaine; second, W. Tremaine; third, J. Rosewarne.

Pen of yearling ewes.—First prize, J. Rosewarne; second, W. Tremaine; third, J. Rosewarne.

South Ham yearling rams.—First prize, W. Hendy, St. Columb; second, J. S. Hallett, Sherford Barton, Plympton; third, J. Stooke, East Sherford, Plympton.

Rams of any other age.—First prize, W. Drake, Warbstow; second, J. S. Hallett; third, J. Stooke.

Pen of yearling ewes.—First prize, J. S. Hallett; second, W. Hendy, Rosewastia, St. Columb; third, J. Stooke.

Dartmoor yearling rams.—First prize, J. Drew, Articombe, Tavistock; second, S. Reynolds, Pengelly, Creed; third, J. Drew.

Rams of any other age.—First prize, S. Reynolds, second, J. Drew.

OTHER LONGWOOLS, NOT QUALIFIED TO COMPETE IN THE
FORGOING CLASSES.

Yearling rams.—First prize, W. Drakes; second and third ditto.

Longwool rams of any other age.—First prize, Mr. Corner, Torweston; second and third Mr. Corner.

Pen of ewes.—First prize, Mr. Corner; second, Sir J. H. Hraethote Amory; third, W. Drakes.

SHROPSHIRE DOWNS.

Yearling rams.—First prize, Viscount Falmouth, Tregothna (Robertson); second, Viscount Falmouth (King Harry).

Rams of any other age.—Prize, Viscount Falmouth.

Pen of five yearling ewes.—First and second prize, Viscount Falmouth.

HORSES.

Agricultural stallions.—First prize, North Cornwall Stud Company (Bobby Burn); second, H. Laity, Crowan (British Yoman); third, Messrs. Charles and Tremaine, Helson (King of the County).

Agricultural mares and foal, or mares in foal.—First prize, T. Pellow, jun., Oshampton (Flower); second, H. Brown St. Austell; third, W. Tremaine.

Agricultural mares and foals, or mares in foal, *bona fide* the property of a tenant farmer in Cornwall.—First prize, W. T. Richards, Callean, Camborne; second, W. Tremaine (Darling).

Agricultural geldings or fillies foaled in 1874.—First prize, J. Robins, Withiel; second, W. James, Probus; third, T. Adams, Treneer, Breage.

Agricultural geldings or fillies foaled in 1875.—First prize, Mr. Stephens, Gustevan, St. Columb Minor (Blossom); second, R. Cardell, Trebelsue, St. Columb Minor; third, Mr. Jaeka, Lanner, Sithney.

Agricultural colts, geldings, or fillies foaled in 1876.—First prize, W. L. Hearle, Feock; second, W. Palmer, St. Winnow; third, W. T. Richards, Camborne.

Best pair of agricultural horses, and *bona fide* the property of a tenant farmer.—First prize, Mr. Stevens, (Duke); second, W. Hendy.

Thoroughbred stallions.—First prize, Col. Ballard, South Wales; second, H. Laity, (Young Randal).

Hacks or hunters, mares and foals, or in foal.—First prize J. West, Hay, Wadebridge; second, W. H. and T. Yeo, Bodmin; third, A. C. Sandoe, Bodmin.

Hacks or hunters, geldings foaled in 1874.—First prize, W. Treneer, Torgrombris, Newlyn (Frederick); second, Thomas Roberts, St. Levan (Reindeer); third, R. Millett, Marazion (Raleigh).

Hacks or hunters, fillies foaled in 1874.—First prize, S. Mitchell, Treverrack, Lelant (Missing Link); second, John Cardell, St. Columb, third, Mr. Tregaskia.

Hacks or hunters, geldings foaled in 1875.—First prize, Mr. Lark, Cornelly (Spinaway); second, R. Cardell, third, F. Stocker, St. Ewe.

Hacks or hunters, fillies foaled in 1875.—First prize, T. M. Cardell, St. Columb; second, W. Tremaine; third, Hart, Key, jun., Penguin, Wadebridge.

Hacks or hunters, colts, geldings, or fillies foaled in 1876.—First prize, J. West; second, W. Trethewy, Tregoose Probus; third, Mr. Sandoe, Bodmin.

Weight-carrying hunters.—First prize, Mr. Tyacke, Merthen (Forester); second, J. Grigg, Naustellan, Creed; third, H. Guy, Endellion (Pretender).

Hacks (mares or geldings).—First prize, W. Whiteford, St. Erme (Jessie); second, J. Bouse, Bodmin; third, J. Venning, St. Mabyn (Polly).

Special prize of £10 for the best weight-carrying hunter (mare or gelding), to be tested over hurdles in the showyard, J. Raahleigh. Second prize.—First, A. Guy, Endellion (Pretender); second, Mr. Grigg, Creed.

Mare or gelding not exceeding 15 hands.—First prize, W. H. Trumayne, Trerice, Newlyn; second, H. Huthnance, Drasick, Gwinear.

Cobs (mares or geldings), not exceeding 14 hands 2 inches.—First prize, Messrs. Yeo, Bodmin; second, W. H. Tremaine, Trerice, Newlyn.

Posies (mares or geldings), not exceeding 13½ hands high.—First prize, Mr. Polkiahorne, St. Columb; second, B. Williams, Carusanton.

DONKEYS.

First prize, Mr. Rowware; second, H. Doble, St. Day third, Hannibal Gribble, Treswithan Downs, Camborne.

PIGS.

Breeding sows.—Prize, A. Edmonds, Trewithian, Camborne.

Small breed—Boars exceeding 12 months.—First prize, Lord Moreton, Totworth Court; second, T. Salmon, St. Columb; third, Mr. Foster, Lostwithiel.

Boars not exceeding 12 months old.—First and second prizes, Messrs. R. and J. Russell, Sithney; third, Mr. Partridge, Hillerton-house, Bow.

Breeding sows.—First prize, T. Salmon, St. Columb (Rosebud); second, R. and T. Russell, Sithians; third, Lord Moreton.

Pen of two breeding sows (of the same litter), not exceeding 12 months.—First prize, R. and J. Russell, Sithney; second, Mr. Partridge; third, W. Tremaine.

Cottagers' pigs.—First and second prizes, T. George, Camborne; third, T. Cock, Tackmilling.

IMPLEMENT AWARDS.

The following awards were made by Mr. George Stephens and Mr. G. Lobb, the judges of implements:—Silver medal to Mr. W. Brenton, Polbathick, for corn drill. Bronze medals to Messrs. Davey, Sleep, and Co., Croft-hole, for adjustable body plough; Messrs. Samuelson and Co., Banbury, for improvements in mower; Messrs. Pooley and Son, Liverpool, for weigh-bridges; Messrs. Clayton and Shuttleworth, Lincoln, for drum-guard to their threshing machine and improved lifting chocks; Mr. J. Prout, Lewannick, for his gate and fastening; and Messrs. Marshall, Sons, and Co., Gainsborough, for improvements in engine.

CALIFORNIA'S LARGE FARMS.—We are not sure of the proper claimant to immensity in the size of Californian farms. Some of them are so large that we dare not trust ourselves to become familiar with the figures, lest we should get a distaste for fractions in our market reports. We cannot state exactly what our querist desires, but will mention a few facts that we have in mind. Dr. Glenn, of Colusa, has the reputation of leading in the line of grain-farming, and he has now 45,000 acres under cultivation. He is making calculations on a crop of 10,000 tons of grain, against 18,000 tons last year. He has already purchased 200,000 sacks to put grain in. Haggin and Carr, of Kern county, had 30,000 acres in their stock farm before they began operations under the Desert Land Law, and now they have perhaps as much more which they will bring under irrigation. The crops this season are 2,000 acres of barley, 1,000 acres wheat, 175 acres corn, and 3,000 acres alfalfa. The stock consists of 10,000 head of cattle, 20,000 sheep, 500 head of horses, and 1,000 hogs. The working force at the present time is 625 men. The San Francisco Post says: "James Irvine is the fortunate owner of the San Joaquin and Lomas de Santiago ranches in Los Angeles county, containing 95,000 acres, and of 12,000 acres in the South Ana ranches adjoining. In other words, he owns 107,000 acres of as fertile soil as is to be found in Southern California." The Butte Record says: "Hill, Boggs and Reavin have now on the rancho in Kern and Los Angeles counties, 10,000 head of cattle, all in excellent condition. Mr. Hill says he will put 1,000 head of beef cattle into market the first of the month. This rancho, belonging to General Beal, our present Austrian minister, is 96 miles in extent, and situated in Kern and Los Angeles counties, and in the dry season of 1864 carried 200,000 head of stock without loss." We give the above statement which we have at hand in answer to our querist. We have more real interest in the landing of small farms than large ones, and should like better to know who succeeds best on the smallest farm than who controls the greatest number of acres—not that we like large farms less, but small ones more.—*Pacific Rural Press.*

CHAMBERS OF AGRICULTURE.

NOTTS.

THE MEAT QUESTION.

On June 9, there was a special meeting of the Council of the Nottinghamshire Chamber of Agriculture held at the Nottingham Town Hall, to hear an address from Professor Gamgee upon the meat question, and consider a proposition which the Professor had to lay before the meeting.

The CHAIRMAN (Mr. Storer, M.P.) introduced Professor Gamgee very briefly at the opening of the proceedings, and said they would all be very glad to hear any statement he might have to make upon a subject which was of the first importance to all of them.

Professor GAMGEE, after giving a sketch of the history of the principal cattle diseases, said, in reference to proposed preventive measures: (the first foreign cattle dealer who could get an interview with the Foreign Secretary would outweigh all the farmers in the world. Directly they wanted to do anything, they were met by a cry that they wanted to come back to protection but a meeting had been held, under the chairmanship of Mr. Clare Sewell Read, and supported by Earl Fortescue, at which it was determined that the working men should be properly informed and educated in the matter, so that they would understand that free trade in meat was not the same as free trade in disease. There was a great feeling in favour of everybody being able to do what he liked, and, fortunately for them, the best way to do with that question would be to deal fairly to everybody. They had all sorts of animals brought into the country, infecting their farms, and their herds and flocks, and if he had the power of an autocrat for ten or a dozen years the first thing he would do would be to close the ports at once. The authorities now proclaimed that first the British farmer must be harassed, and next that there should be restrictions placed upon the foreign importation. He would reverse that plan, and first decree the closure of the foreign ports; and secondly the farmers would look after themselves. He did not say that because he was addressing an assembly of influential agriculturists, but he was positively certain that at the time when there was no cattle imported, no disease regulations required. He was at Manchester market the other day, and he saw there some Scotch animals, which had come by Newcastle from Hamburg or Toningen. He was very much struck with the inferior condition and small size, with the unsatisfactory character generally, of the Continental meat compared with our own, and even with the recent American importations. A large quantity of meat was now being brought into this country from Western America. There would be great difficulty in getting the animals imported, and it was not considered an economy to keep them beyond the period at which they knew it was best to slaughter them to withstand the influences of the long journey. Then the great cheapness of land in Western America rendered it possible to seize the advantage of keeping the animals longer than could be done in England. Thus the American meat came in very large size, and so much had been done even in the very imperfect state of knowledge upon the subject. But the Americans had no foot-and-mouth disease, and their meat came over in splendid condition, owing to its absolute and common soundness. It was difficult to bring over large quantities of American meat, and a great deal of it went to decay almost immediately it was landed. It was good only for the knife and fork trade. People wanted to land it, and then eat it. The important matter would be to have the trade in meat so regulated as to prevent glut on the markets and prevent also the possibility of a pound of meat being sold for anything less than a fair and remunerative price. Farmers did not care for fair competition with foreign meat; that they were prepared to meet, but they feared unfair competition. The advantage of this would be that they would always be able to farm profitably, which could not be done unless the primary condition were to diminish the risk and diminish the loss through foreign contagion; and then, but not till then could the beef manufacture of this country be carried on safely and profitably. He now hoped and believed that they would be enabled to get rid of foreign contagion; but to get rid of foreign contagion they must regulate the traffic both in foreign

and English meat — and his object in being there that day was to show them how they could regulate their trade. They must first take up the subject of the preservation of meat, because they could not get the Government to entertain these rational cattle-disease prevention measures unless they would show that it would be worth everybody's while to carry animals dead instead of alive. It was a pure question of £ s. d. If they could prove, as they had proved in America, that it was cheaper, they would have no difficulty in turning the live meat trade into a dead meat trade. He had first tried the chemical antiseptics, and had been perfectly successful, and was defeated more by the high price of material across the Atlantic than anything else. Beef cost 35 cents a pound in New York, and it was delivered in London wholesale at 6½d., the English people supposed that they had given the Americans a large profit, but as a fact, they had given them only a cent or a cent and a-half in the pound. But this was under the present objectionable system of blowing air over ice, and bringing the temperature down to 32 degs., when it was highly charged with dampness, which tended to sliminess and show of mustiness, which were the great objections to the American meat. Still the Americans show fine, tender meat after being transported over the Atlantic for fourteen days, and perhaps kept for twenty days in the country, and that afforded a hint to us in this country, where the cattle disease question required prompt solution. There was an increasing scarcity of hung beef and mutton in this country, and that, too, was owing to a vicious system, the remedy for which was to be found in Nature's sovereign antiseptic—cold. By means of this decay could be permanently arrested in organic matter and the coming forward prevented of those lower insects, which had an existence just like that of the higher animals and vegetables. The object was obtained by volatilising any volatile liquid, and causing the heat to be transferred into some other matter. This cold could be regulated with the greatest possible nicety. This had long been known, but under the old system it was far too expensive. Now, however, they could produce from 15 to 18 or 20 tons of ice, or the cold represented by that immense store, by a simple application of one of Nature's laws. By volatilising a volatile liquid in this machine, they transferred all the heat from one body of water to another. There was nothing produced and nothing lost. The heat was transferred to a body of water which was used over and over again. With this principle before them they could quite understand that they could build a 10 or 20 horse power engine which would give cold to the district of Nottingham, and from the moment the engine started, he was quite sure there would be an immediate result. Moreover, there would be plenty of people ready and willing to pay for that cold. He might not, perhaps, have been so ready to speak upon the business and economical value of the scheme, had he not had experience in connection with a sheet of ice for skating; but at present, in Manchester, there was a space of 500 square yards of ice upon which young ladies and men skated, and from which the Company got £70 a week without any difficulty whatever. There they had any quantity of cold to produce ice for consumption, and although this had not yet been carried out at Rusholme, they were opening meat stores in London, for the purpose of regulating the dead meat trade all over the land. What they would require in Nottingham would be a glacier-riam at which cold would be produced. He had not the slightest desire to add another to those vicious drinking places about the town; but a place where there would be kept food for the working men's muscle, and means of exercise provided for the more delicate part of the community who had only too little exercise. From a certain point of view he considered the establishment of a skating area as useful, especially for ladies, as anything that could be introduced into towns of that description. Ladies moved far too little. They could not go to music-halls, and they could not play cricket. And if they determined to make cold for purposes of industry, he did not see any very serious objection to having a fine hall in which they might practice skating, which afforded ever-increasing delight. If they established the cold stores he had mentioned ice could be produced there at a rate of from 5s. to 6s. a ton

for the people of Nottingham, and he was confident that the people of Nottingham would richly pay for the provisions made for them. But while talking of a matter in which he felt great interest, he must say, in relation to cattle disease prevention, that proper arrangements should be made so as to ensure that the supply of meat to the people would be properly regulated—that the policy of importing live animals from the Continent should be interdicted, and especially the constant destruction of the farmers' stock.

Mr. GODFREY proposed the following resolution:—

That this meeting recognises the immense loss by contagious disease, both to the purchaser and consumer of meat, due to the importation of live cattle, and considers it essential to make proper provision for the dead meat trade. With this object it is deemed highly advantageous to the town and county of Nottingham to secure the advantages of a glaciarium, with general stores for keeping meat and provisions, and for the storage of ice.

Mr. GILBERT said the consumption of meat had very largely increased, not so much because the population had increased as because the labouring classes consumed very much larger quantities of meat than they used to do. He thought that to prevent disease they should encourage the importation of meat for preservation. He did not see that he could oppose the resolution for a glaciarium or cold stores in Nottingham. But what were they to do in Newark? He did not see that they had anything to do with Nottingham; they were a county body.

Mr. GILBERT MURRAY said the question of the preservation of meat affected the consumer quite as much as the producer. At present it was killed one day and eaten the next, so to speak. A man on Saturday bought a piece of meat which was killed on Friday evening, or that morning, and it was cooked for his Sunday's dinner. This was inevitably so among the middle and lower classes, because they had no means of keeping it. That was one thing in favour of the American meat. It was fit to eat at once, and very nice compared to the English meat.

Mr. BRAUMONT said they were almost exclusively farmers there, and if a glaciarium, properly conducted, would be of service, as with Professor Gamgee's knowledge of the subject, it seemed certain it would, surely none of them would feel a difficulty about seconding a motion of that kind. He had not the least hesitation in doing so. He thought they must all be gainers by the application of the principle.

Professor GAMGEE said it was a great charge against farmers that whenever they came to the carrying out of a practical method they were all at sixes and sevens, and did not know their own minds. He was not there that day to say do or do not establish dead meat stores, but in 1868 and 1869, by experiments which he made he ascertained that by passing currents of cold air over meat at 35 degrees Fahrenheit but never going to freezing point of water, meat might be kept indefinitely. The dead meat stores must be a success, and they could not be at the farms; they must be at the centre of consumption. It was natural that the new system in this district should be inaugurated in the important town of Nottingham, in a working men's centre, and in a consumers' centre generally.

The resolution was carried unanimously.

STAFFORDSHIRE.

CATTLE DISEASE.—VALUATION BILL.—HIGHWAYS.

A meeting of the members of this Chamber was held at Stafford, on Saturday June 9, Mr. J. Brawn, the President, in the chair.

The SECRETARY (Mr. W. Tomkinson) read letters from Mr. J. K. Fowler, the chairman, and Mr. J. Waller, the secretary, of the Home Cattle Defence Association, who asked for a donation from the Chamber to the Association. Mr. Fowler stated that funds were greatly needed by the Association just now to watch the evidence before the committee of the House of Commons, as also to keep a look-out at the ports. The Association had done great service during the past few years with very small funds, and the Chamber might rely on the funds being well expended by the treasurer of the Association. Their opponents, the butchers and dealers at the Metropolitan Market, were very active, and would beat them if they could. Mr. Waller, who dated from the House of Commons' Committee-room, No. 13, wrote:—"It will be a very deplorable thing

if the farmers of England do not get some improved legislation on the cattle question after the costly diseases the country has lately sustained. I believe it will be possible to obtain a report worth having even from this vast committee, but there is a lot of hard work to be done to achieve such a result, as there is no agency in this room on the home stockowners' side but ours."

It was decided to give a donation of £5 to the Association.

The CHAIRMAN inquired whether any gentlemen present were acquainted with farmers or others who would be likely to give practical and valuable evidence before the Parliamentary Committee. He should be glad if Staffordshire could contribute in some way to the enlightenment of the committee. There was no doubt that a vast amount of foreign evidence would be brought forward, and it would be well that the matter should be fully gone into, and that the information which might have been gained in the midland counties, amongst other places, should be forthcoming.

At a later stage of the proceedings it was agreed that the chairman should attend before the committee for the purpose of giving evidence.

The Valuation Bill and its amendments were then discussed, and ultimately the following resolutions were passed:—(1.) "That the invariable adoption of actual rental as gross value would operate oppressively on those ratepaying tenants who pay the highest rents, and are consequently least able to bear the burden; and that objections to valuations should be considered by assessment committees, and power given to appeal."

(2.) "That the rateable value of real property, if properly assessed, represents the actual income, and is consequently the most equitable basis for income-tax under Schedule A."

On the question of "Highway Legislation" the following resolution was agreed to:—"That legislative interference is urgently needed to relieve ratepayers in rural districts from the responsibility of keeping in repair roads maintained principally for the use of the inhabitants of towns and populous places."

WISBECH.

THE VALUATION BILL.

A meeting of the above Chamber was convened on Thursday June 9, Mr. H. J. Little in the chair.

The PRESIDENT remarked, in introducing the business of the meeting, that it was hardly a matter of surprise to find a large number of amendments put on the notice paper with regard to the Valuation Bill, which affected so many of them. There were nearly a hundred amendments, some of which were of an important character. Although last year there was a great objection to the introduction of the Surveyor of Taxes in the Bill, it was noteworthy that this year very few of the amendments referred to it. It was, however, difficult to see how they could escape the intervention of some public officer. He then called upon his brother to introduce the subject.

Mr. W. C. LITTLE gave a short sketch of the procedure of the Bill, the object of which, as they knew, was to obtain uniform assessment of local rates and a common standard for imperial taxes, such as income-tax and house-tax. The Bill provided plenty of opportunity for appeals, and one almost felt a desire to be a lawyer if it passed. It was to be hoped that the facility for appeal would be the means of bringing about uniformity, but he must say he felt doubtful of it. As to the amendments, Mr. Read took the actual rent as the basis for calculating its value for assessment. He had heard Mr. Read say that nothing could be more fair than to allow a person to be his own valuer, taking the value he fixed himself by agreeing to pay so much rent. Mr. Hubbard's amendment was that the basis for calculating the income-tax should be the amount of rent the landlord put into his pocket. Mr. Rodwell had a series of amendments doing away with appeals to special sessions and quarter sessions, and substituting one court of appeal composed of representative ratepayers and magistrates. Mr. Rodwell had informed him that the Government accepted the principle of such a court of appeal, and that the Bill would be withdrawn this year, and introduced again next session with the addition of county boards. He (Mr. Little) considered that special sessions would have a great advantage over the present system of appeals, because the appeals would be heard in open court

and upon oath, while appeals to quarter sessions would be very expensive, as a person going there would have to be represented by a barrister. Mr. Little moved that "This Chamber is of opinion that it is not expedient to adopt actual rent as the basis of assessment," and secondly, "That it is desirable appeals should be made to representative county boards."

Mr. W. MOORE seconded the first resolution.

Some discussion ensued, and the resolution was carried.

Mr. G. J. MOORE, in seconding the other resolution, expressed his approval of the proposal for appeals to be made to representative county boards as a ratepayer, and that he did so entirely independent of his position as secretary to the Chamber.

The resolution was, however, lost.

The subject of "Highway Legislation," which was on the agenda, was adjourned.

THE HOUSE OF LORDS AND MR. M'LAGAN'S GAME BILL.

The House of Lords has done for Mr. M'Lagan's Game Bill what it has frequently done for other Bills—knocked on the head a provision which was, if not the chief, one of the best features of the measure. The worst of the business is, that, while it is difficult to comprehend the reasons for the course taken, so far as they are comprehended some of them do not seem likely to increase respect for the motives of those who have been instrumental in doing the mischief. The Bill proposed to assimilate the presumption of the law in Scotland to that in England, in so far as it gives the right to game to the tenant of a farm and not to the landlord. The House of Lords, led by the Duke of Argyll, of all men in the world, struck out this provision, and insisted that the presumption of the law shall remain as hitherto in favour of the landlord's right. The reasons given by the Duke of Argyll were two in number: First, that the proposal involved a dangerous dealing with property; and secondly, that it would possibly be highly inconvenient in certain cases. . . . It is not too much to say that if the Bill passes without this provision being restored, it will do almost nothing to lessen the feeling in reference to game. It will be said, and that with some appearance of justification, that the landlords are resolved to do nothing, lest there should be a real removal of a grievance which is keenly felt.

There is one other feature in the matter which deserves some attention. The rejected proposal was treated very much as if it had not been heard of before. The fact is, that it has again and again been suggested as the foundation of any proper dealing with the Game-laws. The Lord Advocate of the Government of which the Duke of Argyll was a prominent member, brought in a Game Bill—one of the best that has been seen—and the foremost provision of it was, that the law of Scotland as to the right of game should be assimilated to that of England. A year or two later a Select Committee was appointed to inquire into the operation of the Game Laws. That Committee had the advantage of the chairmanship of Mr. Ward Hunt; it sat for two sessions, and it had referred to it the evidence taken by a previous committee which sat in 1845-46. After weighing all the testimony thus brought before it the Committee made this as one of its earliest recommendations—"That, saving rights under existing leases, the law of Scotland be assimilated to that of England as regards the right to game on land which is let, so as to give the tenant that right in the absence of reservation by his landlord." That recommendation had the approval of Mr. Ward Hunt and the Conservative members of the Committee generally. Prominent members of both political parties have therefore given adhesion to the principle affirmed in Mr. M'Lagan's Bill. Indeed, it has rarely been called in question, and it is difficult to understand why now, at the eleventh hour, it should have been so violently and suddenly attacked to overthrow by the Duke of Argyll and the Duke of Richmond. It may be hoped that even yet the provision will be restored. The exclusion of it will undoubtedly be resented everywhere by those who feel keenly on the subject. The public will not be convinced that the change proposed by the Bill was unjust; and those who are directly concerned may be excused for feeling that they have not had the consideration which their case deserves.—*Scotsman*.

EXPORTATION OF MEAT FROM NEW SOUTH WALES.—The enterprising efforts of Messrs. Mort and Nicholle, in perfecting a process by which fresh animal food, in a frozen state, may be exported, have been so far successful that at the present time a ship is being fitted up for the purpose of conveying the first shipment to England. This ship is the *Northam*, a large vessel carrying four masts, and being of nearly 1,500 tons register. She is admirably adapted for making the first experiment in this new branch of colonial commerce, as her large size affords ample and roomy space for conveniently stowing the carcasses, and for receiving the machinery which will be required for preserving the necessary low temperature. The work of fitting up the ship, though going on with great rapidity, is far from being in such an advanced state as to allow anything like a detailed description being given. This must, therefore, be deferred until a future date, when the work shall be completed, and the ship made ready to receive its freight. At present, however, a general idea of what is intended to be done will be of interest. A large space 46 feet long and 86 feet in what may be termed the circumference, is reserved in the hold and midships for the reception of the frozen meat. This space is lined all round with three-inch planking and it is the only part of the work which has yet been completed. Within this enclosed area it is intended to put another lining of two-inch kauri pine, twelve inches distance inwards from the former, making actually one compartment within another. The space between the two linings is to be filled all round with tallow, so as to perfectly exclude the air. The whole of the interior surface of the large compartment will be traversed by two-inch iron piping laid longitudinally on the sides of the floor and over head, and laterally across the bulkheads at either end, making a continuous length of nearly 10,000 feet. This piping will be connected with the machinery, and through it will be constantly maintained a flow of a cooling liquid, consisting of water and ammonia, which will keep the temperature at 20°. The frozen meat will be packed in the compartment, and the liquid in the pipes will keep it in its congealed condition. The machinery required for maintaining the frigid temperature is an important and expensive part of the arrangements. A large space between decks, under the main hatchway, is reserved for its accommodation, in addition to another space, 16 feet by the width of the ship, in the hold immediately before the receptacle for the meat. It is being manufactured by more than one engineering firm in the city; but, though well advanced, none of it is yet fitted on board the ship. It will be fixed so as to preserve a central position, however disturbed the motion of the ship may be. There will be four small steam-engines, worked by two large boilers. The cooling liquid will be prepared in a large cylinder, and forced thence by the machinery through the length of piping already mentioned, and back to evaporating pans, in which the water will be carried off by evaporation, leaving the concrete to be used again. It is expected that the ship will be ready to receive her cargo of meat sometime in the month of May next, and the quantity shipped for exportation will amount probably to about 200 tons.—*Sydney Morning Herald*, April 6.

STARVING CATTLE IN CHESHIRE.—At Nantwich (Cheshire) Petty Sessions, on June 5th, an extraordinary case of starving cattle came on for hearing, at the instance of Inspector Carter, of the Royal Society for the Prevention of Cruelty to Animals. It appeared from the evidence that on the 21st of April, Superintendent Oxton, of the Nantwich police division, and Inspector Carter, visited the farm of Mrs. Mary Ann Jackson, Church Minshull, and in the shippens found twelve cows in a terrible condition from starvation. The witnesses described the animals as nothing but skin and bone. There was not a particle of food in the mangers, and the animals had raked everything around them that they could reach; and one animal was making a most piteous noise in a field adjoining. Twelve more cows were in nearly as bad a condition, there not being any pasture. Mr. Wall, veterinary surgeon, made a *post-mortem* examination of one of the animals that died, and he gave evidence that it was from starvation. He also ascribed the condition of the other animals to a want of food. The magistrates fined defendant £3 and costs, which were heavy. The sentence, however, was surely a light one.

THE POSITION AND PROSPECTS OF THE BRITISH FARMER.

The following is a full report of the paper read by Mr. Thomas Rose, of Melton Magna, Wymondham, Norfolk, at a meeting of the Maidstone Farmers' Club.

A few weeks ago your committee honoured me by a request that I would prepare a paper on some subject of agricultural interest. That of "The Position and Present Prospects of the British Farmer," was decided on as being one of much importance during the commercial crisis through which we are now undoubtedly passing. I have endeavoured to give this wide, this most difficult subject the most careful and impartial consideration that lies in my power, and it now remains for you gentlemen by a free and impartial discussion to extract any grain of gold there may be in this rough nugget. I will begin with what I consider some of the principal impediments to success in agriculture—viz., the increased cost of labour, its deterioration in quality, the farmer's increased personal expenditure, owing to his more refined tastes and requirements, naturally induced by the higher class education of the present day; whereas our forefathers of a hundred years ago were considered prodigies of learning if they could lay claim to any knowledge of even the three celebrated R's, and as for scientific knowledge necessary to be brought to bear in agricultural matters, that would have been ridiculed as altogether too absurd an idea to be entertained even for a moment. Why, what science could be necessary beyond having a correct eye in order to draw a straight shallow furrow, and to dibble in the wheat or to sow the barley broadcast, and in their due seasons to reap the crops. While for the sufficiently luxurious maintenance of himself and household, was there not always a shapeless pig in the sty, and a side of bacon hanging up in the farm-house kitchen, and did not pork in some shape or the other form the staple commodity at the twelve o'clock dinner of which they all partook, master, mistress, men, and maids together? At bay time and harvest all members of the family, as a matter of course, turned out to assist in forwarding the important work. Rents, too, were many degrees lower, while the actual money outlay for wages formed but a trivial item in the farmer's account book (if he had one). The demands upon his purse also were fewer in every way, while corduroy and fustian, and erst leather breeches were his habitual wear. There are, I suppose, some people even in the present day who consider that the old adage "Times change, and we change with them," is by no means applicable to the well-abused farmer. I well remember when a boy spending the evening at the house of a clerical gentleman, and hearing one of the party remark that farmers had no business to wear broad-cloth, for they would be far more suitably habited in the fustian garb of their forefathers. Even then it occurred to me that there was somewhat of prejudice in the remark, for being naturally fond of figures I began to calculate how it was that a man having so many thousands of pounds of capital employed in the cultivation of his landlord's acres, and also being the grower of the wool from which the cloth is made, should be debarred the use of that article, any more than the manufacturers or the retail tradesmen, many of the latter having only hundreds invested where the farmers have thousands, although, without doubt, the tradesmen's return is far more remunerative for outlay than that of the agriculturist. I remember I went so far as to think that clerical gentlemen themselves indirectly, if not directly, obtained their maintenance from the land in the shape of tithes. These things were well enough in their time, but where should we of the present generation be if we pursued the system of those good old sleepy days? "A change has indeed come o'er the spirit of the dream," and our requirements are totally at variance with those of the pack-saddle and stage waggon days. Our weekly labour account alone costs 50 per cent more than it did 25 years ago, but what is even more damaging to us is the deterioration of our labour, not of our labourers as men. I do not say that: I am merely speaking of the quality of the work they are content to turn out. And therefore, gentlemen, I say that the labour question takes a prominent place among the impediments to our agricultural success. I maintain the farmers are, as a rule, the labourers' best friends, and that all

right-thinking employers are ever ready to advance the interests of their men. I do not agree with those persons who say that in educating the agricultural labourer, we spoil or unfit him for the station in life to which, in the words of the Church Catechism, it has pleased God to call him. I cannot think that because the reasoning faculties of his mind have opportunity of enlargement that he will not be superior to his forefathers: at the same time I am fully prepared to admit that "a little learning is a dangerous thing." Merely a smattering or superficial knowledge of any subject is not worth having, and mostly tends to do more harm than good; but surely when our educational movement shall have had fair time for working and our future generation shall have become the present, we may reasonably look to see them gifted with higher powers and more enlarged ideas than were their fathers. The more skilled the labourer the more valuable it is as a commercial commodity. The labourer's capital is his labour, and he has a perfect right to invest that capital as seems best to himself. Be it our part to make it clear to the employe that his interest is identical with ours, and our interest with his. A good master makes a good servant, and *vice versa*. I hold that the agricultural labourer is in a transition state, as agriculture itself is. It is admitted on all hands that we are passing through a crisis. Let us hope that out of present evil future good may come; as water never fails to find its level so we may hope to live to see commercial agriculture on a sounder and therefore a more satisfactory basis, and this most desirable end can (so far as I can see) only be attained by placing landlord, master, and man on the solid foundation of a sound commercial footing. Progress, like a foaming torrent, cannot be stayed in its course; if impeded, or dammed up in its progress, it will surely burst bounds, and overwhelm and desolate, where, if wisely directed into legitimate channels, it would have calmly flowed on diffusing blessings and benefit. One thing that works sad mischief between the farmer and his men is the constant element of agitation which is kept alive by the perpetual delivery of orations by what I can but term spouting orators. If I judge mostly from one or other of our big towns, what can they know practically of the distress, poverty, and oppressed condition of our agricultural labourers? They make great pretensions of being actuated by friendship for the working man. We all know the magnificent promises they make them with a view to gain their confidence; consequently the suffrages of those labourers, artisans, and mechanics, who are qualified to vote. I flatly deny many of the assertions made by stump orators: let them visit our agricultural districts, they would find there comfortable and clean cottages, with well cultivated gardens, with rents varying from one shilling to one shilling and sixpence per week. The tenants would be well and smartly clad, and well fed. I do not deny that even in the present day there are exceptional cases, but of late years what a vast, though perhaps a somewhat gradual, improvement has taken place in the character and comfort of the homes of our working men. What would not the denizens of the bye-streets and back slums of the big manufacturing towns give to be able to exchange their foul courts and alleys for the pleasant and profitable plot of garden ground which is in most cases attached to our rural "Cottage Homes of England"? I have myself been grieved at the sight of the homes of many town artisans, and have been surprised to find what high rents they pay for wretched and dilapidated houses whose sole merit seems to consist in the fact that they are conveniently situated near the mill, factory, or foundry, where the bread-winners of the family work. As I have passed by I have seen the apparently half-starved children, and the misery engraved upon the mothers' faces, and their surroundings of vice, drunkenness, rags and destitution. I say, in the face of all this, let these gentlemen look at home, and ponder well what lies within their power to do, to improve matters there. To them I repeat the words of an epitaph I remember once to have seen in a village churchyard—

The faults thou see'st in others
Take heed to shun,
Look well at home
Thou'lt find enough undone.

The earnings of the agricultural labourer may, I think, be safely estimated at £1 per week over the whole year, and perhaps even more in many cases and counties, and the produce of their gardens in most instances materially aids them in paying their rent. The actual wage is not by any means too high; what the master justly complains of is the undeniable fact that the quality and quantity of this commercial commodity labour offered them, although higher in price, is by no means of equal value to that obtainable at a lower price ten or fifteen years ago. I do not know the average wage of the town artisan, but I will be bound that although he may be in receipt of 1s. or 2s. more a week he is not by any means better, even if so well off as his country cousin. I know of many intelligent men working in a large and very opulent manufactory at from 15s. to £1 per week, and besides which wage they have no valuable garden to assist them, and have very high rents to pay. A most intelligent man who a few years ago left me to go and work in a manufactory, where he in time rose to the top of the tree and received a guinea per week, had, in addition to buying all fruit and vegetables, to pay 3s. 6d. per week for rent, and rates on his assessment. He has often told me, "I am not so well off as my father and brother who work for you." Again, take the case of clerks employed in offices of different professions, with their salaries of 30s. per week—not often do they exceed £2; they must live in a better and more expensive house, and must keep up a certain appearance; and, taking these things into fair consideration, together with the unenviable sedentary nature of their occupation, I cannot think the farm labourer has any cause to envy the clerk's position. I merely draw attention to these things in order to show there is no real occasion on which to found the windy orations of these itinerant orators; they act injuriously alike on the food-producing and rapidly increasing food-eating community, and do fearful mischief in setting closely connected class against class. It is the professors, ex-barristers, and doctors, who, for the furtherance of their own ends, political or otherwise, go about the country, agitating the minds and inflaming the passions of our rural populations, by preaching from a text the true sense of which they have neither experience, reliable knowledge, or common sense to understand. How many, if any, of us here present, would a few years ago have believed it possible that there either could or would be a union amongst our agricultural labourers? Why, it would have been declared an impossibility; and now, behold, it has become a regular institution in our midst. In spite of some people persisting in saying that the union does not represent the body of our farm labourers, it is a fact that it does, and will continue to do so, notwithstanding anything they can say or do to the contrary. One thing only is left us to do, that is, in self-defence, to combine also. Why should it be a thing impossible for farmers to combine? What should prevent them, and why should they not? I believe the time to be near at hand when necessity, which knows no law, will compel us to unite. And where, I ask, shall we find a more powerful body of men than the combined farmers of England? Lack of unanimity is one of the greatest curses we have to contend against, therefore we must support combination personally, energetically, and liberally, our Chambers of Agriculture and Farmers' Clubs. We must organise Defence Associations and establish arbitration boards where we must settle all differences arising between us and our employes. Until we have such boards established amongst us we shall always be subject to unfair demands, and weak and cowardly concessions. We do not want to crush the labourer. God forbid, but we do want what is fair between man and man, a good days work for a good day's wage, well earned and well remunerated. Let him who can prove himself the best man be the best paid. Why should the man with slow slouching gait and dull intellect, the man who cannot be relied on, the man who cannot or will not work, receive the same rate of wage as an active, intelligent, skilful workman; as is, I am sorry to say, at present, the case in most agricultural districts. No doubt the proper system for us to adopt is piece-work, and where this is not possible, payment by the hour. The young farmers need to be thoroughly trained in the practical work of a farm, so that they may be enabled by their own practical experience to know the value of the work, but I fear there are many of the present day who cannot do this to advantage simply because they do not themselves know the value of the work in question. A great deal of money has of late years been expended in the purchase of so-called labour

saving machinery, and in order that we may be paid for our large outlay of capital, and for the ever-recurring bills for requisite repairs, we must make more remunerative use of it than has generally been our practice. Hitherto in most cases it seems to me that the labourers, and not the employers, reap the greatest proportion of benefit from it, that is to say, instead of expediting work, it only, in most instances, supplements the deteriorated labour of the present day. Those persons who are adverse to the education of the lower orders should remember that machinery requires to be worked by skilled and intelligent men with a technical knowledge of their business; these are and must continue to be necessary adjuncts to its successful and remunerative application. My idea of the signification of the popular cry, education, is that it should mean greater manliness of spirit, wider views of duty, greater powers of reasoning, and more intelligence in grasping new ideas—in fact, less narrow-mindedness.

Another great impediment to an agriculturist's success is that of insufficient capital. This, no doubt, cripples the majority of farmers. Many a promising young man is put in business with a very, very limited capital; and for the greater part of that he has perhaps to pay interest, and has therefore to pay what is commonly termed "two rents." This man struggles on for years perhaps, but strive as he will, he can gain no pecuniary advantage either for his family or as a provision for old age, and in case of death or disease amongst his stock, to which in these days we are so generally liable, he must collapse altogether, and in but rare instances are farmers successful in any other calling, having hitherto had no training which would fit them for commercial life. The ambition of most young men is to farm "broad acres"; would that we could put brains matured by experience into the heads of young farmers, so that they might believe how much better it would be for them to cultivate highly, and spend their time and energy in small beginnings, as there can be no doubt that if many holdings were only half the size, and had the same amount of capital invested in them, the cultivators would be better paid and the productive powers of the land would become more developed. What I hold is this: that the limited amount of capital employed and generally considered sufficient per acre, is not so in these days, although it may have been ample 20 or 25 years since, and consequently it is injurious both to the young farmer, and to the community at large, to allow him to begin a business crippled at the very beginning in his financial affairs. A young inexperienced man is naturally sanguine, his ignorance of life's realities makes him so; he fears nothing for he knows nothing, to him all is sunshine, and his hopes of success run high. But as years roll on he finds in many instances he cannot in these critical times make headway. Strive as he may, he sees himself becoming more and more involved, bad seasons ensue, cattle disease visits him, he finds his banker's charges become a serious item, he still has to pay interest for the money which placed him in business, and every year his expenses increase. Anxiety yields to despair, and he becomes broken-hearted. How much better would it have been for such a man had his friends had the foresight and wisdom, instead of being content to place him inadequately in business, to have advised him at the outset to emigrate to some part of our Colonies, in which I feel convinced there is a wide field open for the enterprising, energetic, and intelligent of our young men, and where a small capital employed with judgment scarcely ever fails to ensure success. To start a man in the insufficient way I have named is both cruel to himself and a loss to the country. How many farmers are struggling through life in this way? The law of Hypothec, or distress, or distraint, by giving the preference to the landlord over all other creditors cannot be a just one, for in letting the land he has the best means of judging the tenant's financial position, and in fact a man gains credit to some extent by the confidence evinced by the landlord in accepting him as a tenant. Being certain of his rent, either in stock, crops, or money, the landlord or agent is apt to be indifferent as to the means the applicant really possesses, therefore the highest bidder, often a man without capital, is accepted, whilst the man of substance, because he makes a more moderate bid, is rejected. Thus the great competition for farms, which I hold to be no sign of either profit or success. If the landlords had only equal claims with other creditors, they and their agents would be far more cautious in selecting able men of character and capital, and with such tenants there would be no fear of loss of rent, and their rejection

would be to struggling men without sufficient means a mere fal deliverruce. Again, and this also is to a certain extent a landlord's question, we want good and sufficient cottage accommodation for the workmen necessary for the farm. On many occupations there is little if any cottage accommodation, and the labourers have to walk a distance of one, two, or even more miles to reach their work, and thus they become fagged out before their day's labour begins. I do not imagine we can reasonably expect our landlords to build cottages for us from sheer benevolence, but I do know that farmers would in most cases be very glad to pay a moderate, but fair percentage, for this necessary boon. Dwellings for the labourer ought to be let with the farm, for what can be a greater evil than to have tenements in convenient proximity, close, perhaps, to our very homesteads, tenanted by persons of no use at all to the occupation on which they are located? How many an employer from dire necessity keeps on an incompetent yardman, shepherd, stockman, or horseman, because if dismissed there would be no house at his disposal as a convenient residence for the successor, and he would have the additional nuisance of not being able to get rid of his former unprofitable servant? We will touch now on another point, namely, the restrictions, stringent, vexatious, and obsolete as regards their present day utility, which are mostly inserted in our farm covenants and leases. The system of British farming consequent on these cuses is simply absurd, and requires radical reform. By all means let the landowners' property be protected from deterioration, but at the same time we demand protection for our own investment. We require security of capital, liberty of cultivation, and freedom to use our own judgment with regard to the sale of our crops. A few years ago it was not requisite to make such enormous outlays for extraneous fertilisers, or for artificial feeding-stuffs. But the case being now altogether different, we must needs modify our course of procedure to suit existing requirements, so that we may be enabled to meet the somewhat newly-inaugurated era of fierce competition in corn, meat, and wool, not from our own colonies only, but also from the continents of Europe, Asia, Africa, and America at large. Because one man has land to let, and another requires to hire land, I do not see why this fact should necessitate obligation more than the fact of supply and demand, between the contracting parties. Of course the landowner institutes (and rightly and justly so) a strict investigation into the character, means, and qualifications of the intending tenant. Being fully satisfied on these points, and having a fair rent, together with a protective agreement, why should he not leave his tenant at liberty, provided he regularly pays his rent, to transact his own business as seems most profitable to himself? Why should it not be a purely commercial transaction? In how many cases does the tenant farmer suffer severe injury to his crops from over preservation of game and from broken fences made by keepers and their watch? Besides, it is impossible to preserve game without preserving rats; and, let the damage done to his corn stacks by these pests be ever so great, where is his compensation to come from? He knows well the slightest protest on his part would immediately produce a six months' notice to quit. To a needy man this means ruin, and if a wealthy man he would naturally be averse to leave a large sum of money sunk in his landlord's acres for which the law affords no redress. A man would be thought insane, or at least be considered a most reckless speculator, who should sink his all in any adventure from which he took no care to ensure a return. But such is unfortunately the case with most of our British agriculturalists. Under the existing law of land tenure, and with the Tenant Right Bill with its permissive clause, a farmer has no security for capital employed. It can hardly, therefore, be expected that those who have money will invest it in a parasit which does not ensure a fair per centage for capital employed, unless, indeed, he be one of the fortunate few, who being fond of farming and country life can afford to indulge in expensive whims, and to whom the loss of a few hundreds a year, more or less, make no appreciable difference. Until security is given by a compulsory Tenant Right Bill the productive powers of our soil will not be fully or properly developed. Surely we have a right to lift up our voices in favour of legislation on this most important point. Tenant Right is by no means a modern cry, for as far back as 1847 a Bill to recognise the tenants' right to security for capital employed and his improvements, was introduced into the House of Commons by the late Mr. Pusey, backed by the late Mr.

Denison (the Speaker), and Mr. (now Sir) Thomas Dyke Acland. A more honest measure was never proposed to the British House of Commons, as it held the balance fairly between the landlord and occupier, at once securing the interests of the owner, and giving the tenant a legal right to his improvements. However it did not pass, and although Mr. Pusey continued his efforts, and afterwards brought in several other Bills, they appeared to have been so transformed in committee that their original signification became altogether altered. Again in the year 1872 Mr. James Howard, late M.P. for Bedford, gave a notice of motion to call the attention of the House of Commons to the insecurity of the tenant farmers' capital, and the injuries sustained by the public thereby. Owing to pressure of business he could not get a night for its hearing; but at the end of the session, through the advice of Mr. C. S. Read, Mr. Howard gave notice that he would introduce a Bill the following session. Had this Bill been passed it would have greatly benefited British agriculture. It provided payments for improvements and *vice versa* for deteriorations. It was therefore fair both towards landlord and tenant. The Duke of Richmond's Bill, with its permissive clause, is fresh in the memory of us all. It is perfectly useless, and therefore it is that, as a body, the tenantry quietly accepted the notices of exemption given by the landlords. As matters now in most instances stand, the tenant simply pays the landlord for the privilege of spending his money and energy, for he holds no guarantee. Tenant Right, therefore, is only based on the broad principle of justice, for since our population has so much increased, and keen competition with the foreigner has run so high, we must, of necessity, have larger production, which means higher and much more expensive farming. In using artificial fertilizers, we do so with a view to stimulate our land in order that it may yield its utmost; this causes a heavy outlay on the part of the farmer, one which in former times was neither thought of or needed. The old system, being self-supporting, required little capital compared with the present method pursued. In old times, none but farmyard manures were used, and little or no outlay for feeding stuff was requisite. Now, with our larger expenditure, we have need to stand on a better footing: that is to say, we ought to have a right for unexhausted improvements, in order that we may be enabled to reap that we sow. But who, for one moment, would or could expect to have his own invested capital protected by law, unless the landlord's acres were equally guarded from deterioration? If tenants stood on more equal ground in making business contracts with their landlords, it would, I think, be found that the superior would suffer no diminution of prestige, and that, as a rule, his land would be better cultivated, and the property improved rather than otherwise, for, as I once before wrote, "Self-interest is one of the main pivots on which the world turns." Make it to a man's interest to benefit you whilst benefiting himself.

It appears to me, and it has been observed by many of our leading men, that a steady deterioration is going on in the producing powers of this island. This must be in a great measure attributed to want of security for capital (and somewhat, also, I fear, to lack of capital). If this is an undisputed fact, then I say "Tenant Right" is not a farmer's grumble only, but is of the highest importance to the owner, the occupier, and the whole community. The population of Great Britain has since 1801 increased from 10,000,000 to 28,000,000, and a recent leader in *The Times* estimates that it will be doubled in 54 years, and in five generations will become 300,000,000. And by the police reports we learn that 30 miles of new streets and public ways, and 10,000 new houses have been added to London during the last year, and the same thing goes on proportionately in other large towns. The productive powers of our soil must therefore be taxed to the uttermost in order to feed these teeming millions. Here again is another argument in favour of "Tenant Right." The average amount of capital now employed in the cultivation of land is about £8 per acre. At the same time, on many farms the capital employed is quite £20 per acre, and this sum is by no means too large. Security of capital would naturally induce more money to be invested in agriculture, and increased capital should mean increased production; but before we can expect this desirable end to be brought about, our Parliament must grant us a sound Tenant Right Bill, not permissive, but compulsory.

We now come to one of our most serious impedi-

ments—viz., the contagious diseases to which our herds and flocks are subject in consequence of the importation of foreign cattle. The most formidable of these are undoubtedly of foreign origin, and it is now generally admitted that none of them are indigenous to this country. Of foot-and-mouth disease, which Professor Fleming says has its origin in hot countries where cattle are worked, but of which we knew nothing until August, 1839, it is said that it was imported here from Holland. At that time it was illegal to import cattle from abroad, but Dutch cows were of brought over for the supply of ships on their passage, and it is well known that on their arrival in this country they were often disposed of as surplus ship stores. Certain it is, however, that this most horrible disease was unknown in this country previous to the year 1839, and that it prevailed at that time in South Holland, where it had been known for many years. The disease first made its appearance at Stratford, by the waterside, not far from the Docks, whence it spread to Islington, and from thence to different parts of the country. The late Professor Youatt considered that he traced the first outbreak of foot-and-mouth disease to two lots of some bovine species brought over in 1839 for the Zoological Gardens, London. All, however, are agreed on one point—viz., that it first appeared in this country in 1839. We did not experience any very serious losses from it until after 1863. It has, however, since that date appeared periodically with more or less virulence, and since its first introduction here it has assumed a much more malignant form, aggravated doubtless by the close confinement, sea-sickness, and consequent punishment during the voyage over. It is computed, and I think with justice, that the losses by it exceed that by rinderpest. I learn by Mr. James Howard's paper on "Our Meat Supply," read before the London Farmers' Club in February, 1876, that "in the year 1872 no fewer than 52,000 cattle were affected in Cheshire with the foot-and-mouth complaint. Cheshire, being a breeding and dairying county, the number of cows and heifers is large in proportion, as would be the loss also. In this county alone, to say nothing of sheep and pigs, the loss cannot be estimated at less than £150,000 to £160,000 for that year. Mr. Duckham, when giving evidence before the Parliamentary Committee in 1873, also handed in a paper and returns showing the direct money loss sustained in the year 1872 by the stock-owners of Herefordshire from foot-and-mouth disease. In this paper Mr. Duckham showed that if the loss was as great in other parts of the United Kingdom, it would amount to the astounding sum of £20,000,000, a sum exceeding by four times the total value of our live stock importations. In the years 1873 and 1874 this disease was fatally prevalent in Norfolk, and the other day, while travelling up to London with one of our most eminent veterinary surgeons (Mr. Wm. Smith of Norwich), we entered into a calculation and computed that the loss to this country in those two years alone amounted to upwards of £27,000,000, taking, of course, into the calculation not only cattle, but sheep and pigs; many sheep in the county of Norfolk and I dare say other counties also, were entirely ruined for breeding or any other purposes. Mr. Smith (a man of vast experience) was inclined to the opinion that rare and occasional outbreaks of foot-and-mouth disease might arise from atmospheric or other similar causes, independent of immediate contact with diseased animals. But the outbreak of this disease in December, 1876, in Norfolk, has proved to his mind that contagion is the only cause for its production, for in an area comprising some 14 miles around Norwich, including the market and lairage connected therewith, no case of foot-and-mouth disease existed for ten months, until it was brought from and traced directly from the Metropolitan Market, where it soon showed itself with great virulence. When we see that the value of imported cattle and sheep in 1875 amounted only to about £5,000,000, and this was in excess of any previous year, I do not hesitate to say we should have had more meat and cheaper, and the breeder and feeder would have been remunerated, had we never received a single head of live stock from the Continent. About two years since I wrote to *The Times*, and the principal agricultural paper, in order to draw attention to the disastrous consequences of foot-and-mouth disease which was then raging in our midst. And I believe I may say I was one of, if not the first person who advocated the slaughter at port of embarkation of all Continental sheep and cattle intended for our English markets, at the same time explaining that the meat might easily be conveyed fresh as when slaughtered, by means of such excellent contrivances as

Captain Acklom's patent refrigerating chambers. But at that time this system was declared to be impracticable. My letters, with others, were quoted in the House of Lords by Earl De La Warr, who powerfully advocated our claims to useful and protective legislation. However, as is well known, the Duke of Richmond would do nothing for us, and declared that such a system could not be successfully carried out. It has, however, since been established in America, and is now one of the institutions of that great country, from whence we are receiving large cargoes of good fresh beef. According to official statistics 6,707,000 lbs. of fresh beef was exported from New York and Philadelphia to England during March last, making a total of 30,000,000 lbs. during the last nine months, besides many thousands of carcasses of sheep. I see no reason to alter the opinion I formed two years ago, and I boldly say that if Continental graziers had been compelled to kill on the other side of the water we should not now have had what is considered by some the most fearful of all cattle maladies, viz., cattle plague. Pleuro-pneumonia first appeared in England, according to Professor Brown, in the year 1841. And in a speech made in the House of Commons by Lord Robert Montagu, when he was Vice-President of the Privy Council, in 1867, he said this was like a Dutch importation, though it reached England by the way of Ireland. Cattle plague, or rinderpest, was also imported into this country, by way of Holland, in the year 1745, when a sailor brought over two infected calves. It was not extirpated until 1757, when, after raging here for twelve years it was stamped out, and we heard no more of it until the year 1865, when it reappeared, and raged with fearful virulence, decimating some of our finest and most valuable herds. Once more it was stamped out. Now unfortunately it has again reappeared, and I may say in our very midst, and who shall say where its ravages will cease? Surely by this time even our cautious Duke of Richmond must be convinced that the existing laws are not sufficiently stringent to protect our home cattle and sheep from the frightful chances of being decimated by imported diseases. At the annual dinner of the Chichester Cattle Show in December, 1875, the Duke of Richmond, in speaking of the precautions taken by Government in order to prevent the spread of imported cattle disease, said that he not only appeared before them as Lord President of the Privy Council, but also as one largely engaged in agriculture, and therefore that anything likely to stop cattle disease must interest and affect him, as much and perhaps more than those around him. As an illustration how interested he was he gave an account of his own stock down with foot-and-mouth disease in July, 1874. He had then no less than 2,997 sheep affected; but confessed he was fortunate in the type of the disease, as out of the 2,997 he only lost one sheep. Besides those he had 61 Scotch bullocks and 57 Alderney stock affected, and in addition to these 88 pigs had the complaint. He said he mentioned these facts to prove that he had a practical knowledge of the disease, and the necessity of getting rid of it if possible. He said that, as the Lord President of the Council he was bound to take an impartial view of the matter, and that the interests of the meat consumers ought to be considered quite as much as the producers. His Grace went on to say there was great diversity of opinion. There is, of course, for "many men, many minds," but breeders and graziers can hold but one opinion on the subject, and that is to get rid of foreign diseases as soon as possible, and to pass stringent measures in order to prevent their re-importation, the only true means is to stamp it out at home, and to compel slaughter of all live imports at ports of embarkation. The Duke of Richmond's flock is situated in the county of Sussex, a sheltered place, into which little or no stock has ever been imported, and the cattle market of its capital, is only a fortnightly occurrence. Again, his pure-bred herd of Shorthorns are in a sequestered part of Scotland, and small is the quantity of stock imported to the neighbourhood of Fochabers, therefore I think his Grace's chances of disease are below the average. My own experience is, that in the years 1873 and 1874 I lost £2,000 by foot and mouth and lung disease. My flock and ewes suffered fearfully; I lost nearly 100 of them, and nearly 100 more had dead lambs. I may say the ewes left never fairly recovered; besides these I lost a great many good hoggets or tegs, and 45 of my bullocks came to nothing. At our Norwich weekly market which I suppose is one of the largest if not the largest in England, it was, until lately, impossible to buy stock without having foot and mouth disease into the

bargain; consequently those persons whose farms abutted on the high roads were subject to constant and repeated outbreaks of the worst types of the disease. I agree with Mr. Stratton who, in his speech the other day at the Central Chamber of Agriculture, said he considered the re-appearance of cattle plague amongst us was a God-send to the farmers of England, for surely we now shall have efficient legislation on the subject, and with that legislation will come, I trust, the cessation of the worst of all contagious diseases, foot-and-mouth, by which we sustain greater loss than from any other complaint, cattle plague included, as it creeps about more quietly. Hundreds of sheep and cattle from the Continent are shipped at our ports, with the disease in an incubative state, when it is impossible for the inspectors to detect it. These stock convey infection to all parts, there'ore it is that I say that the present system of inspection is useless. In 1866, when we were last visited with rinderpest, a friend of mine, one of the largest stockowners in the eastern counties bought foreign sheep for grazing purposes, English sheep being so dear. One lot of 300 he sent to an off farm, half of them died from small pox, 150 he sent to a friend, they also were found to be suffering from small-pox, and had to be all killed, another lot were rotten, and most of them died, others had foot-and-mouth disease, and some which cost 80s. each when bought, five months afterwards were only worth 60s. each. He also informed me he never bought a single lot of foreign sheep without the scab, a disease caused by heat and overcrowding in the voyage over. Of course this gentleman discontinued the purchase of foreign store sheep. Few Englishmen, if any, buy foreign sheep or cattle for grazing purposes. I venture to say that we might travel for a week, and not find a single lot grazing in the country. Therefore the argument, "If we kill fat stock at the port of embarkation, what should be done with the store stock on their arrival here" no longer holds good, because we get comparatively none. The Privy Council having let in the cattle plague—they knew it was creeping westward, and yet did not stop German imports until she had actually sent us the plague—allowed the local authorities for three months to trifle with this terrible disease before they put in force the stringent powers conferred upon them by the Act of 1869. And now, instead of acting up to the knowledge they possess, they seek refuge in another Committee of the House of Commons. That Committee is to be nominated to-night, and out of the 19 English members, 12 represent boroughs, and only 7 counties. What sort of a report they will make, may be conjectured when we find the leading men on the Committee are Messrs. Forster, Bright, Chamberlain, Mandella, Peel, &c. And instead of finding among the county members our leading practical agriculturalists (Mr. C. S. Read, Mr. Pell, and Mr. Phipps, &c.), we find Sir Selwyn Ebbeson, Sir Geo. Jenkinson, Mr. Wilbraham Egerton, and Mr. Pease are supposed to represent the farmers' interest. What is really wanting is not more information, but more pluck—not enquiry, but prompt and energetic action. We found fault with the late Government for trifling with these terrible diseases, and now the "farmers' friends" are in power, after memorials, deputations, and all kinds of Parliamentary pressure, we are treated to a committee, two-thirds of whom are representatives of great towns, who can know nothing and, perhaps, care less, of cattle and cattle diseases. It is a most astounding fact that this question has been made a political one. The late Vice-President Mr. Forster, and the now President, the Duke of Richmond, assign as a reason for not slaughtering at the port of debarkation the injury inland towns would sustain by the enhanced price of meat. I think we may fairly deduce from statistics that the importation of foreign stock decimates our herds and flocks, and depreciates them in money value to a very far greater extent than the value we receive from imports. For the favour granted the foreigner we have to pay heavily. Why have not we therefore a right to legislative protection, especially as it is demanded by the united voice of the British farmers? If it lies in the power of man to prevent these contagious diseases from being conveyed here, it is his bounden duty to do so for the benefit of the people of this country. It is not possible to bring large shiploads of cattle from abroad in a healthy state, huddled together as they are in close dirty holds; the sudden changes of temperature, and the ill-treatment to which they are subjected, must, and will, and do create disease. I see no other means of prevention than by slaughtering at place of pasturage, or embarkation, and it would be to

the advantage of foreign graziers as well as to ourselves, were they to kill their animals in their own country, as it is a well-known fact animals lose weight when they journey alive from the Continent; even in travelling from Aberdeen to London a 60 stone (14 lbs.) bullock will lose 40 or 50 lbs. in weight, and for this reason it is that north country people prefer sending their animals dead to the London markets. Charity, it is said, begins at home. Should rinderpest put in its dread appearance in the large and very valuable herd of his Grace of Richmond, possibly he might be induced to view the subject of legislative protection in a different light. The property of the British farmer should be protected from these ravages. "It is the husbandman who feeds the citizen, the magistrate, the gentleman, the ecclesiastic, and whatever artificer and craft may be used to convert money into commodities, and these back again into money, yet all must ultimately be owed to be received from the products of the earth, and the animals which it sustains and nourishes." And now we will briefly review the malt tax. It is, as regards the interests of the producers, a fair thing; a just thing; a right thing, that barley should be so heavily taxed? The amount of the tax is 21s. 8d. per quarter, and a most inquisitorial and expensive imposition it is. This year it produces £8,000,079 17s. 6½d., while only £7,887,576 5s. 9½d. was paid into the exchequer, therefore the cost of collection was £112,563 11s. 9½d. It may be said, if you deprive the revenue of this large sum, what are you going to propose in its place as a substitute? I think the difficulties attending the replacing of the malt tax are by no means insurmountable. The maltster pays no duty on malt made for distilling purposes, but the tax is paid on the manufactured article, "Spirit." We see in the Inland Revenue Report under the head of malt made free of duty for distillation, for the year ending March 31st, 1876, that the quantity is 486,172 bushels in excess of the quantity for the year ending 1875; and I believe the quantity of home-made spirits manufactured in the United Kingdom, for the year ending March 31st, 1875, was 31,319,042 gallons, or 574,392 gallons in excess of the previous year. Why should it be difficult to transfer the duty from the raw material, "Barley," to the manufactured article "Beer," if no more desirable substitute could be devised. Our complaint is, that all other corn is free from duty but the one crop the farmers in many districts could grow more advantageously than any other, is to them, indirectly heavily taxed. It seems to go very much against the grain to pay a heavy tax on our own production while the foreigner can send his barley here for brewing and other purposes duty free. Besides it is so thoroughly against the principles of free trade. Many farmers say that the repeal of the malt tax would not benefit them in any way. Why, gentlemen, it is admitted to be the most valuable of feeding stuffs both for sheep and cattle, and as an exhibitor of the latter, I can vouch that there is no food used which will produce the "mellow touch," maintain the "blooming appearance," or retain the enviable "moosey" silky hair so efficiently as will a proper proportion of malt. Some persons believe there is no food equal to cake. Surely most of these have never given malt a trial. Now, what is much of the cake used composed of? Various things; some of them objectionable. The foreigner not only sends his corn over here duty free, but he also sends us the manufactured article flour; the latter system is a decided loss to the British farmer, consequently also a loss to the British consumer. The first two months of the present year we received 995,275 cwt. of foreign flour, the value of which was £835,375, and doubtless by the end of the present month we shall have received double that quantity. In losing the grinding of the wheat we lose the advantages of the offal, bran, pollard, &c. So that, after all, our cake consumers get this offal only at a very dear rate in the shape of oil cake, in which there is a very large admixture of bran. It must be admitted that it would be advantageous were we permitted to cook our own produce barley for the fattening of our sheep and cattle, instead of paying the foreigner such high rates for a mixture of offal and linseed. Again it is the wish and request of the majority of an important class of the community that the malt tax should be removed, and for this reason, if for no other, it ought to be repealed. It was the intention of Sir Robert Peel and Mr. Cobden at the time of the repeal of the Corn Laws that this tax should be done away with, as both of them said without its abolition free trade would not be complete. An old argument in its favour, but which no longer holds good.

was, that it was a protection, as the brewer could only afford to malt the best barley. Now times are changed and science has taught him he can malt any kind of corn, he also uses great quantities of sugar for the manufacture of the "nut brown ale." The duty of malt is paid directly it is in the steep—six months before it is used for the manufacture of beer; but the duty on sugar is not paid until it is put into the vat. In the year ending March 31st, 1876, 58,993,409 bushels of malt paid duty, less by 739,152 bushels in 1875—a decrease to the revenue of £92,059, while the quantity of sugar used for brewing purposes gave an increase of £35,153, equivalent to 468,975 quarters of malt. It is not many years since it was universally believed we should always remain the sole producers of malting barley, but see the quality of the grain we receive from the South of France, and also that beautiful bright barley we get from Germany, "Saale barley." In 1875 the latter was superior to any of our home-grown production, and although not quite so good this season I believe it has only in rare instances been surpassed, and then by a few samples of your Kentish barley, which superseded it in colour and quality.

I now come to another subject which I consider of some importance to the welfare of the British farmer—viz., what I can only term the unfair manner in which the corn averages are returned. For much information on this subject I am indebted to Mr. Orleur, a large merchant residing at Norwich, who has interested himself very greatly in agricultural statistics. Many years ago the corn returns were mainly established by our forefathers, that the ministers of the day might have an idea how much corn there was in the country, and thus provide more in case there was a scarcity, as well as determine the same for duty and tithe. It is on the average price of corn that the tithes are assessed, but under the present system we do not get at a true return. For instance: a farmer sells a lot of corn to a merchant, who gives the collector the cost price. The merchant sells the same corn, doubtless at a profit, to another merchant, in a different part of the country, who again returns it to the market collector. This time it has added to the original sale the first merchant's profit, also the expenses per quarter of rail or water carriage; in fact, one lot of corn often gets returned three or more times; therefore, it is but natural to arrive at the conclusion that the published corn averages are higher than the actual fact warrants, and are not reliable. Besides, this plan makes no mention whatever of the dross corn which is in most cases consumed by the grower. Of course, were this at a fixed rate of, say from 10d. to 1s. per stone to be computed with the best corn, it would materially but not, I think, unjustly affect the average, especially when as in some seasons it amounts to quite five per cent. Again, wheat is mostly bought by weight, 36 stone per quarter. I doubt if it averages more than 34 stone per 8 bushels. I have taken some trouble to learn the cost of collection, and after much fruitless inquiry was at last told that it was £1,090. I must say I was surprised at the comparatively small amount, as I had believed it was very much more costly. Still the taxpayers have to pay it, and be the cost of collection great or small, the return is fallacious. Now, for a suggested remedy for this grievance, which seems not only feasible, but desirable. It is this, that the grower should fill up a printed schedule somewhat like the one appended:—

CORN RETURN FOR THE COUNTY OF DISTRICT.

I, Parish of, farmer, do hereby declare that I sold on the 1877 the undermentioned corn to of and that this is the first time the said grain left my farm.

qrs. of	Wheat,	at the price of	s. per qr.
"	Barley,	"	"
"	Oats,	"	"
"	Beans,	"	"

As witness our hands,
..... (Seller) Farmer.
..... (Buyer) Merchant, or Miller.

On selling his produce, sign the form, and when he goes next week for his money, the merchant should also sign off stamp it, and the farmer put it into the box and let it go by post free, as it is, or would be a useful national report. To this, said Mr. Rose, in order to arrive at a correct knowledge of the quantity of drop corn grown by each farmer, I would

propose that he should not be allowed to use, or make off with any until the policeman of the district, or some other appointed officer should have seen, and weighed the quantity. The result should be entered in two books (duplicates) and duly certified and signed by both parties. At the end of the season, when the books or forms are made up, let the officer satisfy himself that the farmer's correctly tallies with his own and the result be entered on a regular form, and posted by the official to the Inland Revenue office. By returning the original sale price of corn as sold by the growers, and also the consuming value of the dross corn, we should arrive at a more correct average, and consequently should have a juster foundation on which to found the amount of the. I have shown, and I think correctly, that the position of the British farmer is by no means an Arcadian one at the present time, and that if we fail to obtain compulsory legislative security for our capital, and laws to protect our flocks and herds from being decimated by contagious disease, we cannot fight on equal grounds the fierce battle of competition with the foreigner. I will now endeavour briefly to review our present prospects. America with her 28,000,000 of cattle, and 40,000,000 of sheep can, and will continue without doubt, to send us large supplies of meat. And at the same time we must take into consideration that we have only 9,000,000 of cattle and 30,000,000 sheep, and are constantly subject to any imported disease the foreigner likes to send us over, so that unless our stock are efficiently protected we shall stand but a poor chance in the race. From the report of the Agricultural Department of the United States we learn that the operations of the farmers and graziers there have passed beyond the earlier and more primitive stages, and have entered, as the report shows, upon the regions of the scientific. The chief aim of the Agricultural Commissioners has been to ascertain all newly discovered improvement in the kind and quality of seeds, the best modes of cultivation, the implements most adapted for the purpose, and also the quality of soil, and condition of climate congenial to their growth. The addition of the crops of wheat and oats show an increase of many million bushels. Farmers and planters have learned to discern in their vocation something beyond the mere drudgery of sowing and reaping. The distribution in their midst of foreign statistics such as may serve, by comparison and suggestion, to advance the interests of rural economy, have excited a taste for agricultural reading, and have greatly stimulated agricultural thought; especially in new and poor settlements where they have proved pioneers in all that pertains to agricultural progress. It is there remarked that Great Britain is a larger consumer of animal food than she has ever been before, owing both to her increased population and to the increased ability of her working classes consequent on their better wages to buy better, and more meat, therefore a wider market now opens for consumption than at any previous period. The American farmer, who is far from sea-board naturally finds his advantage in turning his corn into the more condensed value of flesh, instead of selling his surplus corn at a home market. The cost of carrying a cart-load of cattle from the Western States, Chicago, &c., to New York, weighing ten tons, is about the same as a load of corn of equal weight. The value of a cart-load of first-class cattle is about 7 cents a lb. is 1,400 dollars at New York, while that of a cart-load of corn, 330 bushels at eighty cents a bushel, is only 828 dollars. Thus the farmer obtains an increased price for corn when turned into beef. It remains to be seen how far this conversion may be carried to supply the demand for the outlet obtained on this side the Atlantic. Thus it is plainly to be seen we have this new and formidable rival to encounter, (I mean imported meat from America). The late high price of beef has been no source of profit to the grazier although perhaps the breeder may have derived a slight benefit from it. Taking into calculation the cost of a root crop and the artificial food bill, I say it is difficult for the grazier to show any profit. Some people assert there is an indirect profit in the shape of more corn. Granted, the more artificial food used, such as oil-cake, &c., the more the productive powers of the land are improved, but who is so visionary as to believe in indirect payment? Corn has of late years been so low in price that they who believed in this theory must, I should say, be now inclined to discard the idea as fallacious. For the British farmer to be enabled successfully to compete with America in producing meat, he must have improved farm buildings, fitted with labour-saving contrivances and covered yards, so as to be enabled to effect a greater saving of straw, and quicker fattening of our beasts, which is

indeed quite as much by a proper degree of warmth, as by suitable food; also the manure would be more valuable. What have we not suffered for want of straw during the past wet winter, whereas had many of us had proper buildings we should have had enough, and, with a given quantity of food in a given time, our cattle would have been quicker grazed, and consequently more valuable and profitable.

I do not advocate expensive farm buildings, but only what are necessary and comfortable for the well-doing of our stock. It is grievous to see how lavishly and carelessly money is too often spent in the erection and repair of perhaps unsuitable buildings on many of our large estates, such work being often left to non-practical agents, who put it into the hands of the estate builder who frequently reaps a bountiful harvest. It may be said this does not matter to the tenant, as the landlord pays the bill, but I think it does materially affect him, as no landlord can afford a perpetual outlay in bricks and mortar; therefore it is worth his while to cause sufficient and proper attention to be given to the matter, to ensure that the buildings be erected suitable for the purposes for which they are required, and as economically as is compatible with durability, otherwise, although the landlord may make large outlays, the tenant by no means reaps any benefit, but only the builder. Therefore I say this is oftentimes a great impediment, and seriously injures our prospects.

We will now glance for a moment at the foreign and colonial importations of corn and wool. In the United States of America, maize and wheat can be produced in the rich virgin soils of the far West, and placed in market of Europe, after paying cost of transport, so as to compete successfully with the English farmer, whose payment for rent, rates, fertilizers, and labour, more than balance the cost of transport. Every citizen of the United States, when he reaches the age of 21, is by law entitled to 160 acres of land, on payment of 6d. per acre for registration; he must, however, live for five years on the land, which may be selected by the applicant from the Government lands of the States, of which there are now 150,000,000 acres unappropriated from which to choose. They can also, if they wish, claim 160 additional acres of prairie land, provided they plant 40 acres of it with trees, which must be protected for eight years by fencing. So that for the outlay of £9 every person can own in fee-simple 320 acres of rich soil suitable for agricultural purposes. Land being thus easily acquired, the farmers of the far West are able to own the land worked by them, so that with these vast resources and advantages, we may expect to receive not less, but more, corn. Then again, look at the vast resources of South Australia (excluding the northern territories); the total area is 245,338,930 acres, or nearly three times the size of Great Britain and Ireland. Agricultural settlement has not yet extended 150 miles from the coast, so that there are still vast areas of land which will doubtless, in the course of a few years, be cultivated by agricultural settlers, and yield immense crops of wheat, while from districts devoted to pastoral purposes we must look to see ever-increasing quantities of wool imported into our home markets. At the present time there are 6,179,395 sheep in that colony. About two-thirds of the land now in cultivation is cropped with wheat, of which grain 439,638 acres were reaped in 1875, yielding 9,863,693 bushels. The increase of wool is 50 per cent. during the five years ending 1875, and during the decade it has doubled. The value of South Australian wool shipped in 1856 was £412,163; in 1866, £990,173; and in 1875, it reached £1,833,519 sterling. Besides all this, in the Australian colonies of New South Wales, Victoria, Western Australia, Queensland, Tasmania, and New Zealand, there are 5,664,483 head of cattle, and 57,636,334 sheep. In British South Africa there are about 11½ millions of sheep, and in 1875 we received from thence 44,112,313 lbs. weight of wool. These facts lead me to believe that the day is yet distant, when we shall see wool much dearer than it is at present; although, of course, the market will fluctuate. In this matter I do not see we can fairly expect a very much improved prospect. Time will not permit me to go into the question of rating, sanitary, educational, and other matters which weigh so heavily on the British farmer. The abolition of turnpike trusts has, of course added considerably to the farmers' burdens. No one objected to the small payments demanded at the toll-gate; for those who used the road shared the cost of keeping it in good repair. Much might also be said on the subject of poor rates; the expensive machinery employed costs the money, not the maintenance of the poor.

As I before said, the young, intelligent, and industrious farmer who is not overburdened with capital would do well to emigrate to one or other of our colonies, where land is cheap and fertile, and an industrious population means wealth. One thing I believe to be necessary to a farmers' success, is, that he should keep rigid and correct accounts, so that he may be enabled to know on referring to his books how he stands, so as at once to detect and discard any unprofitable part of his business. I consider, too, that the somewhat recently established repository stock sales are most injurious to a young farmer, for by such a system he has no opportunity of becoming a good judge of the weight of a fat beast, sheep, or pig, for seldom or ever do two ballocks, for instance, of equal weight, make an equal price. The persons benefitted by these sales are the auctioneers and the butchers, the latter, I am told, often making agreements not to oppose each other in certain lots. For our agricultural prospects to be improved we want many more such practical, hard-working, out-spoken men in the House of Commons as Mr. Clare Sewall Read, the universally beloved and much valued member for South Norfolk (to which district I am proud to say I belong). His voice is always uplifted fearlessly and generously in all matters pertaining to the welfare of agriculturists. I need not dilate further on the hon. gentleman, he is better known and valued by landowner and land tenant than I can pen. It is often said "We do not want speakers in the House of Commons, there are enough there already." Gentleman, that is just what we do want. All other trades and professions have their scores of "speaking" members to plead for them, but the British farmer has but one or two to advocate his interests. Mr. C. S. Read is the most powerful, and is always listened to. Still his voice is but one among many. Then again we have on our side a good and valued friend in Mr. Pickering Phipps, a true friend to the British farmer, both at the Chamber of Agriculture and in the House of Commons, and to the electors of Northampton. I say "do not lose him." Our interests sustained a severe loss when that talented and good man, Mr. James Howard, late M.P. for Bedford, was compelled to retire from his post in consequence of ill-health, but let us hope that rest and change of climate has so far restored him that he may be induced to again take a seat in the Commons House of England. We should all right gladly say, the right man was in his right place. And if we wish to have our interests fairly represented in the House of Commons we must return practical men at our several elections. And now, gentlemen, I beg sincerely to thank you for the kind forbearance with which you have listened to this somewhat lengthy paper, and I trust that among the many different points I have offered to your notice you will be able to meet with some serviceable matter for discussion. The lecturer resumed his seat amid loud applause.

SIR ROBERT PEEL AND MR. MECHI.—The following letter was addressed 27 years ago by the late Sir Robert Peel to Mr. Mechi:—"Whitehall, February 13, 1850. Dear Sir,—I am very much obliged to you for the enclosed. Have you any confidence in such offers of supplying manure as that which I enclose? I have just given an order for 40 tons of Peruvian guano and 4,000 bushels of crushed bones, which I mean to distribute among my tenants, with the view of encouraging a more extended use of those articles. Perhaps you may know some of the parties who certify the successful experiment of this manure. If you were breaking up a quantity of old turf, for the purpose of subsequently laying it down with good grass seeds, and intended to take a crop of oats for the first crop, how would you treat that crop as to top-dressing, &c. &c. Depend upon it, the time will come when, despite of the sneers of those who under-value science and experiment, such men as yourself and Mr. Haxtable will be acknowledged to be public benefactors.—I am, truly yours, ROBERT PEEL."

AN EXTRAORDINARY MARE.—Mr. Stanford's "Monop," the celebrated steeplechase mare, 28 years old, foaled twice a few days ago, which we believe, an almost unprecedented circumstance. This is the mare which for several years in succession carried off races at Ringmer Steeplechases. Her progeny is highly valued but, we believe, is very scarce now.—*Sussex Express.*

LAYING DOWN PERMANENT PASTURE.

The following is a full report of the paper read by the Rev. C. T. Corrance, before the Framlingham Farmers' Club.

The subject on which I have undertaken to read you a paper to-night is of so much importance at the present time that I cannot help wishing it had devolved on some more competent person than myself to introduce it. Laying down land to permanent pasture is confessedly an operation of difficulty, and one which, even if successfully performed, may be destroyed by subsequent mismanagement. It is a work of time and patience to convert arable land into a good grass sward capable of producing one ton and a half of hay per acre, but when this result is produced the value of the land to the owner and occupier thereof is at the present time increased by at least one-third, and this should be sufficient encouragement to us to persevere in what may at first sight seem a hazardous and expensive operation. The first thing to be done in laying down arable to grass is to see that the land is well cleaned, and as much as possible freed from those weeds which, if left to germinate unmolested, are likely to be troublesome for many years to come. Therefore the year before the seeds are sown it will be necessary to make a good summerland sowing thereupon, of swede or white turnips, and feeding the same off with sheep if the land is not too heavy; but if the turnips are pulled, then a top-dressing of two cwt. of Peruvian guano should be applied the following year after the sowing, when the young grass begins to show itself above the ground. The seed bed should be perfectly even and fine, and lightly harrowed before and after sowing. If sown by hand an experienced sower should be employed, and a still day chosen for the purpose. Whether corn should, or should not, be sown with the grass seeds is a matter of dispute, but the most general practice I believe, is to sow the grass immediately after the corn, whether it be oats, barley, or wheat. Some tell us the corn crop is sure to rob the grass, and particularly to smother and hinder the growth of the finer sorts, but others with equal confidence maintain that the shelter afforded by the growing corn is of great use to the young seeds on strong land. Most of us would be inclined to adopt this latter view, as the value of the corn crop is an important element in the consideration of this expensive operation. Oats are thought to be better than barley or wheat for this purpose, but they should be thinly sown about nine rings on a ten farrow stretch will be sufficient. When the young grass is three or four inches above the ground it should be rolled, and if sown without corn, the weak places may be mended by re-sowing; if sown with corn, then the re-sowing should be done immediately after the corn is harvested. Much depends, of course, on the choice of grass seeds, and great care is required in their selection. It is difficult to get good seed from the hay-loft, not only because our pastures are not so good as they ought to be, but also because, as a rule our meadows are manured too late, and fed too late in the spring. Thus we are obliged to let the grass stand until the most valuable seeds are gone, and when it is cut, say in the early part of July, we obtain those seeds only which are of the least value for the purpose we require them. Where, however, as in the county of Middlesex for example, the grass is better cultivated, and an earlier hayseal ensured, better and more dependable results can be obtained from the seed. As a rule, in this part of the country, I believe it is better to use selected seed, purchased from some respectable firm, and adapted to the quality of the soil. The cost of the seed, whether it be bought off the hay-loft, or of a merchant, will be much the same, as in the latter case where the seed is selected, two bushels of grass seed and 12 lbs. of clover seed will be sufficient to sow an acre at a cost of 35s. or 36s. Another very important element in the consideration of this subject is the quality of the soil. A good medium loamy soil is best adapted for permanent pasture. Where the land is too light and sandy no proper accumulation of vegetable mould takes place round the roots of the plant, which, by a continuous underground growth, and the action of the earth worms, should annually deepen and improve its own seed bed. These conditions cannot be fulfilled in a sandy soil, which, owing to its porosity, causes a decay of the roots more

rapid than their growth, and is consequently sensibly felt by the plant in dry and parching seasons. In very stiff, cold clays, on the contrary, there is an absence of all porosity in the soil, which becomes kneaded together by the process of laying down, so as to impede the growth of the roots of the plant, and the creation of rich humus by the earth worms. Both these extremes of very light and very heavy soils are unfavourable to the growth of good herbage, though by claying the former where practicable, and draining the latter where necessary, these unfavourable conditions may be greatly modified. But this leads me naturally to another branch of my subject, viz., the after-management and improvement of grass land. Let us suppose, then, that the grass has been properly laid down on suitable land that has been duly drained, cleaned, and levelled, and this is supposing a great deal more than is actually carried out in practice, still our real work is not yet done. However promising the young grass may look, we must not take liberties with it, and suppose it will bear the depletory practice which is resorted to by old and well established pastures. Therefore, I cannot agree with those who feed young grass the first winter after sowing; nor do I believe that a heavy coat of manure is suited to plants in so tender a stage of growth. The proper course would be to give the young layer a light top-dressing of short and well rotted manure early in the winter, which will both protect the plant from the effects of frost, and encourage its early growth in the spring. I would roll and very lightly bush-harrow the layer in March, and then mow it late, say at the end of June or the beginning of July, so as to allow the best sorts of grass to shed their seeds, which happens in the middle of June. It is to the future, and not the present hay stack we must look, since any ill-timed parsimony now, or any premature desire of realisation will deprive us of permanent profit, for the sake of a very doubtful present advantage. In the autumn the layer may be grazed with cattle, but not with sheep, for they bite too close, and pull up the young grass by the roots. Nor should the cattle remain on for too long a period, and any tufts of rough grass they leave should be mown. The next season will be critical and trying, as two exhausting crops will have been taken from the land, and, therefore, a liberal coat of good farmyard manure should be spread on the pasture as soon as the cattle are removed from it; and if this is not available at the time in sufficient quantity, two cwt. of Peruvian guano should be added. The following spring the pastures should be rolled and fed with cattle, but not mown at all during the summer. And here I leave this part of my subject. It remains for the occupier to follow up the treatment which the young layer has received; it is now in a condition to reward him for his pains, labour, and expense, and it will do so if honestly treated. At the same time he must remember that young pastures, promising at first, are apt to fall off; they will require care and watching for many years, until by a continuous course of judicious management they acquire that necessary substratum of humus, of which I have already spoken, and which in old pastures runs to a depth of five or six inches under the grass, as you may see by digging a sod out. The accumulation of this humus being due to the causes I have already mentioned, requires time, especially in stiff clay soils; but nature's underground tillage may be accelerated and assisted by draining the land where required, and so increasing its porosity, and by supplying materials on the surface for the formation of this vegetable mould. I now come to a very practical part of my subject—viz., whether, having regard to the present relative value of corn and stock, it might not pay to lay down again some of the old broken up pasture lands, and if so, to what extent, and under what conditions? Now if there were two causes which led to the breaking up of our pastures—first, the then high price of corn, and second, the consolidation of the small farms into large ones, which led to the conversion of a good deal of first-rate pasture land which was no longer required round the homesteads into arable. And, of course, so long as the high price of corn continued, and the vegetable mould of the old pastures incorporated in the soil by tillage remained unexhausted, golden profits were realised; but this day-dream was not lasting. Agriculturists were at

that time in the position of men obtaining a high and risky interest for their capital, which sooner or later would be sure to suffer. And, therefore, so soon as the price of corn declined, and the rich humus of the old grass became exhausted, it became clear that if the business of farming was to remain as profitable as heretofore a different system must be pursued. And then came a time of improvement in the general treatment and tillage of the soil, and in the employment of agricultural machinery, and the use of artificial manures and feeding stuffs, which in the opinion of sanguine optimists was destined to replace us on that secure pedestal of prosperity from which we had descended with rather alarming rapidity. I must candidly admit that these means, judiciously applied, gave a great stimulus to agricultural prosperity, and did much to postpone—I will not say altogether to avert—the evil day prepared for us by the destruction of our old pasture lands, and our inattention to the good cultivation of those that remained. I do not believe that the most suitable rotation of crops, the most scientific application of artificial manures, or the most perfect system of drainage, will prevent our lands from becoming, as the expression is, “stale,” that is, wanting in those elements which are essential to its fertility. The period when this staleness will supervene must vary according to the nature of the soil, and the treatment which the land receives; but on poor, cold, thin-skinned, clay soils symptoms of unproductiveness will not be long in making their appearance, unless proper and efficient means are used to prevent it. The most hopeful plan of effecting this improvement in a permanent way is to lay down a larger proportion of pasture in every occupation, so that no less than one-third of the whole farm be grass—or say 30 acres out of every 100; and where the condition of the soil is favourable to the growth of grass, a larger proportion will be found to pay well, the tenant being allowed to sell a certain proportion of the hay crop, bring back an equivalent in manure. As a rule it is most convenient that the grass land should surround the homestead, but this rule must be liable to such exceptions as the character of the soil may require. A good rich pasture half-a-mile from the farm house will be found more useful than a poor one close at hand, and if there are woods on the occupation it certainly pays the occupier in the Eastern counties better to have pastures near woods than corn. As to the expense incurred in laying down land to grass, it is difficult to give any very accurate estimate, still the great importance of the question induces me to attempt it, and after the best consideration I can give to the subject, my belief is that the cost of laying down suitable land to permanent pasture will be from £9 to £10 per acre, such sum to be spread over the first three years, after which period (provided the necessary conditions for the success of the operation have been fulfilled) the new pasture will begin to be fairly remunerative, and at the expiration of six or eight years will be more remunerative than the same quantity of arable land, because the cost of labour thereupon will be materially diminished, being, according to an approximate estimate, about one-fourth of that which is required on arable land; besides which every additional acre of good pasture land contributes very sensibly to the productive capacity of the arable, by enabling the occupier to keep more stock in a healthy and remunerative condition. In this way, then, the pasture and arable lands may be said to act and react beneficially on one another, the former by feeding a large head of stock, and the latter by growing a greater bulk of straw, to be returned to the pasture in the shape of manure. The following statement of Mr. Caird plainly shows the advantage of having a sufficiency of pasture in proportion to the arable:—He states that “while France has 53 per cent. of its cultivated land under corn, England has but 25 per cent, but in grass and meadow, the natural food of live stock, England has 50 per cent. and France only 22. Notwithstanding this enormous difference, England grows five and one-ninth bushels of wheat to each person, and France five and a-half bushels. Every acre of corn land in England receives the manure on the average from three acres of grass (such are the relative proportions of grass and corn), while in France the manure from each acre of grass must be spread over two and a-half acres of corn land.” But supposing we admit that the proportion of grass to arable is insufficient, and that we should do well, especially in this country, to increase the acreage of our pasture land, it has, of course, to be asked upon whom should the first expense fall? If, indeed, it was a question of laying down land to grass for a couple of years as the Scotch do, to avoid

the risk and expense of the third year, it would simply be a tenant's question; but where permanent and not temporary pasture is the object, the landlord's interest in the soil is so clearly involved that the first outlay must of necessity fall upon him, and the only question remaining is for what proportion of the subsequent outlay should he be responsible, having regard to the benefit which the tenant will ultimately derive from the improvement? The tenant's contribution would, I think, have to be fixed with reference to the duration of his lease. He could not expect to reap much benefit from the new grass for the first three or four years, and might, therefore reasonably look to have his rent entirely remitted for the above period in respect of the acreage of his arable land converted into pasture. The grass seeds being provided by the landlord, the tenant, would of course, be expected to give them a fair chance, and treat the new layer in all respects as he would treat it if he had a 21 years' lease to run on the occupation, because if he chose to leave in a few years he would be entitled, under proper agreement, to receive compensation for an unexhausted improvement, which would probably benefit his successor more than himself. In any case I think a matter which is so clearly for the permanent interest of both landlord and tenant would not be difficult to arrange equitably and satisfactorily to both parties. Leaving this, therefore, I pass on to another and very important branch of my subject, and one which has given rise to much discussion, without any corresponding practical benefit—I mean the great, need of improving and farming the present pasture lands in a better way. I suppose there are few parts of England where the arable land is farmed better, and the pasture worse, than in our county of Suffolk. It is true that our climate, being one of the driest in England, is more favourable to the growth of corn than grass, yet it is also true that not so very many years ago we had pastures which would bear comparison with many in the most favoured districts, and dairies of red cows which produced those famous cheeses which only wanted the name of Stilton to command the same high price in the market. Those dairies have disappeared. What mines of wealth would they have yielded now with butter at the extravagant price it has commanded of late! Too much tillage has dried up the sources of revenue, and moderate grass farming leaves us no hope of their return, unless a change for the better is made. Whether we look at uplands or lowlands, gentlemen's parks, or the snug paddocks of retired independence, the same sight meets us—loss of valuable meat-producing herbage—and in many cases not merely a deficiency of the right sort of grass, but a superabundance of the wrong sort, such as thistles, vetches, docks, plantain, and land whin, which, having succeeded in expelling the rightful occupiers of the soil, are now struggling for predominance in admired confusion. In some cases, indeed, the grass has the appearance of never having been properly laid down; the unevenness of the ploughed stretches is still seen under the scanty herbage, which looks as if it had been suffered by a natural process to encroach from the headlands to the middle of the field, the result being a crop of couch and water grass, for which paring and burning is the only efficient remedy. Having had occasion to deal with a so-called pasture of this description some years ago, I can bear testimony as to the efficiency of paring and burning on heavy land, where simply breaking up the turf would almost to a certainty multiply the evil tenfold. The plan I pursued was this:—The turf was pared to the depth of about four inches by a gang of men hired for the express purpose; it was afterwards collected in heaps and burnt, the ashes spread over the land, ploughed in, and a turnip crop taken, followed by a thin crop of oats with grass seed, and the operation was in every way a successful one. But, of course, in the great majority of cases this extreme remedy will not be needed. Poor, blue, steely-looking pastures may be much improved by drainage, by liberal manuring, and by feeding cattle with cake thereupon, which often seems to change entirely the quality of the grass, and produce a different and superior herbage. These remedies are more likely to produce a permanently good effect than top-dressing of artificial manure, which, though useful in assisting the hay crop in a well-to-do pasture, are hardly to be recommended for the renovation of the soil where it is out of condition and partially exhausted. Boning and liming grass land are also highly spoken of, and in Cheshire and some other parts of England boning is said to pay well; but it is an expensive operation, and has not been found to succeed very well in our Eastern counties. Liming is a very useful remedy for an ex-

cess of moss, improves the quality of the grass, and seems to encourage the growth of white clover and other useful herbage. Both these operations, however, are first-class improvements, and should be the subject of special agreement between landlord and tenant. Above all, it is necessary, in order to keep pastures in a profitable state, not to mow it too often unless an adequate return can be made in manure. It is not sufficiently considered that the hay crop removes more nitrogen from the land than rye, oats, barley, or wheat, and that not only is no return made to the mown meadow in the shape of special manures, but the stock fed on the aftermath are often driven off at night to help to enrich the arable. Can we wonder that the process of deterioration should proceed so rapidly in pastures thus treated, and that the most valuable grasses begin to die out, and thistles, which ought to be unsparingly mown down in the earlier stage of their growth, are left to seed and extend their baneful influence, until they threaten to obtain a parochial settlement, and we begin to think it would be a good thing to plough up the turf, which annually disappoints our expectations. Having thus endeavoured, inadequately I fear, to fulfil the task I proposed to myself, it is now time to bring this paper to a conclusion. The importance of having a due and sufficient proportion of grass land to every occupation cannot be exaggerated at the present time, when the problem to be solved is how to obtain the best return from the land without materially impairing its fertility. Injudicious and over-cropping our lands, even under the influence of highly stimulating manures, is not likely to prove a lasting benefit. Land for the most part is honest, and will respond to all reasonable demands on its resources, but we must not work a willing horse too hard. We must give our grass lands a chance as well as the arable, increasing their acreage where necessary, and improving the condition of those which exist at present. Such a plan, I feel convinced, holds out a fair prospect of success, and if persevered in will result in increasing benefit, and is also, I believe, well adapted, if not altogether to mend, at least to meet, the critical time on which we have now entered.

The CHURMAN, in inviting discussion, commented on the interest and importance of the subject, and observed that if grass were laid down only temporarily, the land would be in a fine condition to revert to corn growing.

Mr. RENDLE asked what grasses Mr. Corrance would recommend.

Mr. CORRANCE replied, tall fescue, various leaved fescue, hard fescue, cat's tail, or Timothy smooth-stalked, meadow grass, rough-stalked meadow grass, giant fescue, meadow grass, nerve seed meadow, and meadow fescue.

Mr. RENDLE also suggested gold grass and red and white suckling, with fair quantities of red clover.

Mr. FLINTHAM approved of Mr. Corrance's paper, but did not agree with allowing the young layer to stand till July, believing that it exhausted the plants more than the profit for the seed would compensate for—he believed that it would be better to sow a little fresh seed.

Mr. P. READ believed farmers would hardly know which field to give up for pasture, and argued that the Eastern counties were not the place for grass. He quoted from the Royal Agricultural Society's volume for 1875 to show that it was more profitable to grow corn than pasture unless it was a superior pasture. Mr. Meehi had expressed his conviction that to keep land under permanent pasture was a mistake, and almost a crime. The return from permanent pasture was only £3 2s., as compared to £10 per acre from arable land. Mr. Read caused some amusement by speaking of comfrey as a crop which would yield 300 tons per acre.

Mr. J. BURT believed a good deal of poor land might be more profitably worked by laying it down temporarily.

Mr. GOODERHAM concurred in this. Permanent pasture, in his opinion, seldom paid well.

Mr. GEORGE GRAY regarded it as almost a ruinous thing to lay down permanent pasture, even though the landlord might find seed. The pastures were too often neglected in regard to manure, and he advocated farmyard in preference to artificial manure for pasture.

Mr. READ argued on the authority of Mr. Meehi that the profits from pastures were more precarious than from arable land, and referred to the experience of Messrs. Prout, of Sawbridgeworth.

Mr. GOODERHAM favoured the growth of artificial grasses rather than laying down more permanent pasture, but he

would not break up pasture now, as nothing paid better than stock.

The CHAIRMAN observed that much judgment was required in selecting grass seeds suitable to a particular soil. If Mr. Gooderham could show them that he could make enough from his temporarily laid down grass to answer his purpose, he thought it would be preferable to having to go to the landlord for a remission of rent.

Mr. FLINTHAM expressed his approval of Mr. Gooderham's plan, but as to poor pasture much profit could not be obtained from it, and he agreed with the advice to plough it up.

Mr. CORRANCE then replied upon the discussion. The plan advocated by Mr. Gooderham was, he said, much favoured in Scotland; at the same time, his object in reading the paper had been to endeavour to show how much it would benefit the present occupations if much larger portions than now consisted of grass. He believed the benefit would be considerable, and there was one point of importance which had not been touched on—the indirect benefit which the grass conferred on the arable land by enabling the occupier to keep more stock. One objection to temporarily laying down pasture was the danger of getting the land foul, and he put it too them, as practical men, whether a farm on his plan would not be worth more in the market than one on Mr. Gooderham's plan. As to farmers being loth to give up a field to pasture, it would in reality not be given up, but improved; and admitting that arable land paid better than poor pasture, why, he asked, should the pasture be poor? The best artificial manure for grass he believed was superphosphate. Nitrate of soda, while it increased the quantity, did not produce grass of good quality, and stock did not thrive upon it.

DEAD MEAT IMPORTATION.—Some idea may be formed of the magnitude to which the trade in foreign meat has now grown by the figures given in a Parliamentary return just issued. It appears from this document that the total quantity of dead meat imported into the United Kingdom in the first three months of the present year was 477,698 tons. Fully two-thirds of this consisted of salted beef and pork—articles which have been introduced from abroad regularly for thirty years past, mainly to be used for ships' provisions, and probably not above 150,000 tons at most is fresh beef or mutton such as the home consumer requires. But 150,000 tons a quarter is 600,000 tons, or 12,000,000 cwt., a year; and without drawing very elaborately on the rules of Cocker, or the imagination of the professional philanthropist, we may see at a glance that this supply from abroad is equivalent to the provisioning of several of our large towns from extraneous sources. The return, in truth, gives but an imperfect notion of what the new sources of supply lately opened are worth, for it is only during the last few months that the import of fresh meat from the United States can be said to have commenced. Each quarter as it passes will show the development of this trade, and we cannot at all speculate on its dimensions at present. Yet one thing is already clear: nothing else than the accidents of the sea will interfere with it. So far as is known there has not been a solitary instance of mishap in all the importations of meat from the Atlantic coasts since the year opened, caused by a defect in the preserving process, so by some fault inherent in the meat itself. One failure certainly there is—in the cargo by the Iman steamer which had so long been overdue. That vessel, the City of Brussels, left New York on the 31st of April, and has only just arrived at her destination. She has thus been more than a month. Instead of eight days, on her voyage; and it is not surprising to be told that when the ice ran short the fresh meat portion of the cargo had to be thrown overboard. This, however, is an extreme case. Any steamer may break her shaft, and have to proceed under sail; but the accident, for all that, does not frequently happen, and it really would seem that, short of this—short of a delay which multiplies nearly five-fold the average length of the voyage—there is no obstacle whatever to sending any quantity of fresh meat as cargo across the Atlantic. In fact, the difficulties will diminish, as experience shows, particularly as we happen to witness the somewhat singular result at present, that the home farmer, who is generally jealous of foreign meat, eagerly clamours for it now as the best way to keep out rinderpest—a much greater evil than the competition of Australian mutton or American beef.—Daily Telegraph.

SCIENCE AND THE FARM.

BY CREON.

The extraordinary advances made by agriculture during the last century are matters of daily comment. The substitution of mechanical for manual power, the high pressure aspect of farming, the sewage farm, and the immense competition in market from foreign producers are topics of general almost hourly discussion, and sufficiently declare on the slightest comparison with the records of past agriculture, the magnitude of the change to which I allude. The farmer is no longer the uncultivated, illiterate hind, content with his own unassisted observation as guide to the tillage of his land. He no longer holds the theory that book-learning spoils his labourers, and the prejudice against machinery is of necessity a thing of the past, which the advancing civilisation of the community at large relegates to the limbo of forgetfulness.

The immediate cause of all the changes, however, seems to me to be the extensive application of the results of purely physical science. Until quite recently agriculture seems to have been left out in the dark in this respect, and while important discoveries without number in physics were being made, while men of learning were refining the people with pieces of immortal literature, and while social institutions were rising rapidly for the benefit of all other classes, the farmer was either overlooked as outside the pale of learning, or remained unprogressive through his own exclusive tendencies, which were undoubtedly mainly caused by the deficiencies of early education and subsequent training. Thus when Newton was announcing his glorious conceptions, and revolutionising the scientific world, the only educational works, or investigations concerning a much more utile subject to us, namely the tillage of the soil, were either so purely theoretical as to be practically useless, or so technical and pedantic as to be of little use to the ordinary farmer; indeed, they were not written for him.

Slowly, however, but not the less surely, science and learning have stepped from their high self-erected pinnacle and become allies and friends of the agriculturist. The desirability of making two blades of grass grow where one only grew before has become apparent. The farmer no longer looks askance on the advantages of culture and the results of science, but, invoking the aid of both successfully, prepares to meet the demand of an increasing population, and the niceties of greater civilisation. It is strange, however, in this connection to observe that nearly three hundred years ago

The broad-brimmed Verulam

The first of those who know,

in the marvellous method of scientific application, the *Novum Organum* sketched out the very plan on which science now seeks to benefit not only agriculture, but all the arts.

Socrates asked of his young friend Glaucon, "Shall we set down astronomy among the subjects of study?" "I think so," answers Glaucon; "to know something about the seasons, the months, and the years, is of use for military purposes, as well as for agriculture and navigation." And this strikes the key-note of our subject. We see what results have ensued from the proper application of meteorology quite recently. Thrice during three weeks the electric messenger conveyed the news of impending storms from shore to shore of the broad Atlantic. Thrice these predictions were verified, which if acted upon promptly would save incalculable loss to the agriculturist. Yet half a century ago such warnings would have met with unqualified scorn, or apathetic disbelief. Thus

thousands of years ago Plato indicated an important application of science of which we are only at this late date availing ourselves. And it may be asserted that it is precisely the province of all natural philosophers not only to discover and announce, but to apply truths of this sort to the daily affairs of mankind. Science unapplied is like the ox of Prometheus, a sleek, well-shaped hide stuffed with rubbish, goodly to look at, but containing nothing to eat.

But of all the different branches of physics which have lent their aid in agriculture, probably chemistry stands pre-eminent. The nature of soils, the composition and desirability of manures, the histology of plants, and consequent knowledge of their chemical requirements, all these and a host more of collateral issues, advantageous to mention, but which, owing to the exigencies of space, I must pass over, are comprehended in the category. A long array of scientists have lent their time to the study, and ample results are forthcoming to show the advancement of mankind in this particular industry, since Lucretius accounted for the mystery of germination in this way:—"By first beginnings of things in the earth which we stimulate to rise," or "by there having been given to the different trees a strong and emulous desire of growing up into the air."

The subject of agricultural chemistry is so vast as to preclude a consideration of it here in anything like a utile form, but I cannot forbear to cursorily instance what has been done in a curious but exceedingly valuable section of it—viz., microscopy. In the selection of wheat for seeding purposes the farmer, for obvious reasons, relies generally on his experience of such grain for quality. So far, there is no objection to this procedure. But when it is necessary to obtain an absolutely accurate knowledge of the grain in question, as to its purity, health (that is, freedom from natural diseases to which such vegetables are liable), and freedom from living parasites, the microscope is of necessity the only reliable means of effecting the purpose. Thus if the wheat grains be affected with rust, burnt, or smut, or dust brand, the means of detection indicated are those only by which either of these almost exactly similar diseases are to be precisely ascertained. In England good wheat weighs about 60lb. to the bushel, and the minimum weight required in the Belgian army is 77 kilogrammes the hectolitre. Fungi of all kinds, of course, considerably lessen the standard. The weevil is also found to be very destructive in some cases, and, thanks to the microscope, has been carefully examined and described. Occasionally, as is well known, its ravages leave but the outer shell of the grain, the whole of the starch being completely eaten. The *acarins farina* also occasionally preys on wheat, but can only be seen with high powers of the microscope.

In connection with the meal of wheat microscopy is yet more useful, and for the purpose of the detection of adulterations is indispensable. Microscopical examination is, however, specially directed in most cases to the relative amount of pure flour and bran, and to the presence of fungi or acari as well as adulteration. Then, in order to value the relative proportions of the bran and flour and to detect the presence of adulterations, an intimate knowledge of the structure of wheat is necessary. A technical synopsis of the various divisions and subdivisions of this structure with their differentiation would of course be out of place in these columns. I shall therefore content myself with:

outlining the method of their operation. At present there is very little adulteration of flour in this country. Should the price rise to any considerable extent the case would be different. In other countries, however, we are informed on the authority of Dr. Parkes that it is more common, and it is therefore necessary to investigate this point in connection with imported flour. The chief adulterations are by the flour of other grain, and may be thus roughly enumerated: In native flour, barley, potatoes, beans, peas, oats, maize, rye; in foreign flour, rice, buckwheat, millet, linseed, melampyrum, lolium, together with some other grains noted lower down. For the detection of these there are only two methods, one of which is costly and uncertain, and the other simple, inexpensive, conclusive, and unfailling. The former is by a chemical analysis; the latter by microscopical examination.

The determination of a mixture of barley can with care be easily made. The envelopes of the grain are the same number as those of wheat, but are considerably more delicate. The walls of the external layer of wheat are bearded, but those of barley are beautifully waved. The second coat or skin is much more beautiful and delicate in barley than in wheat. The third coat is hyaline and transparent as in wheat, but the cells of the fourth coat essentially differ in size and disposition. Of potato starch the detection is much more easily made than in the case of any other adulterating agent. The grains of starch under the glass, instead of being round or oval, and with a central hilum and *obscure* rings, are pyriform, with an eccentric hilum placed at the smaller end, and well-defined concentric rings. Weak liquor potassæ (1 drop liq. pot., "British Pharmacopœia," to 10 of water) swells them out greatly after a time, while wheat starch is not affected. If the strength be 1 to 3 the swelling is very rapid, and consequently the difficulty of detection is a matter of no moment to the experienced observer. The starch grains of Indian flour are so compressed in their envelopes as to be angular to a degree. This feature renders the admixture capable of immediately being perceived. The cellulose also is immensely distinctive. Of

bean and pea, as well as of oatmeal, the same pronounced difference is observable; in fact, barley—the chief of native adulterations—is the most difficult of detection, and this can be easily achieved after a little experience and manipulative care. Buckwheat in wheat from the Baltic; millet in India, Egypt, China, and the West Coast of Africa; melampyrum or corn wheat (the bread of which is smoky-hued or violet), trefoil, and sainfoin, all more or less have been used as adulterations to wheat flour. Of course to the private consumer such information is of small value, but when the immense quantities required by and supplied to the military authorities are taken into account, such investigations become a matter of vital commercial importance, especially in time of war. And not only of commercial importance. Some admixtures, such as ryegrass, are positively poisonous. Drs. Parkes and Hassall, Pelleschek and Pererira, all agree in describing its physiological effects as extremely pernicious. The symptoms produced are narcotism, vertigo, hallucinations, delirium, convulsions, paralysis. The physical structure of the flour is, however, easily perceivable, as in all other grain under the microscope.

Thus I have instanced wheat and its flour as a fair example of the results of science adapted. On every side the same step in the right direction seems reproduced. What the ancient poets—Homer, Heriod, Lucretius, Virgil—once did for the agriculture of their day, in some sort science performs for the "farm" of the nineteenth century. No longer the voice of "sweet singer" is raised in praise, direction, or guidance of the agriculturist; but in place of this the unrolling of Nature's laws enables the scientific man to till the land not to the harmony of numbers but in accordance with the deductions from observed physical facts, leaving the rest to natural influences, till, as Æschylus sings.

From the kindly sky the rain shower falls
And fertilises earth: and earth for men
Yields grass for sheep, and corn, and Dædæra's gift.
And from its wedlock with the South, the fruit
Is ripened in its season.

TWICE ACROSS THE PYRENEES.

By H. KAINS-JACKSON.

Spain in April and May has a climate greatly in contrast with the bitter end of spring in England, and a journey twice across the Pyrenees—west and east—should furnish observations of some interest, if made, as they are, quite independently of guide books.

Accustomed to surveys of the crops at home and in France for many years, I have taken special note of the prospects of oil, corn, and wine, over nearly 2,000 miles of country, so far as the yield may this year affect the wealth of two nations, France and Spain; whilst my note-book records two phases of social life that many believe to be passing away.

Of the well-known track—London, Paris, Bordeaux, Bayonne, Madrid—the journey may be dismissed as a common experience, with one reflection: the cigarette is undoubtedly usurping the functions of the obsolete snuff-box as a means of showing politeness amongst travellers. It emphasises conversation in Spain—it gives time to the business man to make a cautious answer, as his fingers roll up the dainty morsel; and what snuff was to one generation the cigarette is becoming to the nineteenth century. In northern lands, where a man *must* have his pipe, he is therefore Protestant, married, and smokes. In temperate and Catholic France the priest alone abstains from an unnecessary carnal enjoyment; but cross the

Pyrenees, and the clerical can hold out no longer, for being in the south he, like others, rolls up his cigarette, and smokes it on his way to church, showing that tobacco, like climate, has its zones.

The wheat plant was barely a covering for the ground on the sandy African plateau of central Spain, the elevation being 3,000 to 4,000 feet, where passes "the highest railway line in Europe." However, great—almost measureless—breadths would make up for thinness of plant, where daylight allowed me to see it; and the better districts of Castille, near Burgos, Valladolid, &c., could not be observed as the night express flitted past.

But going further I was to see more—to leave the wilderness of rocks and sand, and reach a fruitful paradise 360 miles south. Really satisfactory signs of farming began to appear when my aneroid barometer showed the elevation was sinking to a few hundred feet above sea level; yet for quite half the distance the corn looked low and backward to an English eye, even so late as on the 23rd of April. But the train rolls on descending, and, about 6 a.m., rushing through dense misty clouds, the other side showed the sun up, and shining on the great plains and valley of the kingdom of Valencia, yet too distant for the eye to distinguish cereal or foliage in the masses of verdure, green as an English lawn, and in con-

trast with the red arid bareness of the enclosing mountain range. Another half-hour gave detail to the green breadth—it was the fresh spring green of the orange plantations, here and there toned down by the sober grey-green tints of the olive trees. The valley level was reached, and now corn is seen, thicker, taller, and nearer harvest, until, at Alcúda, I see the first wheat-ear of 1877, on Tuesday, the 24th of April. It was the scout of an army of wheat-fields, tall, and thick, and in full ear, and which for 200 miles along the Mediterranean coast made the land fat with its promise of plenty, and notwithstanding a great natural drawback. The river beds we passed were all dry, but yet the field gardens are not suffering from drought; they are not thin and thirsty, but have a bacchanalian look of strength and jollity, and with good reason; for they are soaked every day, if needed, by the system of irrigation bequeathed by the Moors to Spain—a system that would make many another desert to bloom with fruit and corn, and which, as described by others, I pass over, merely testifying to its results this season. These are really astounding in a period of drought, and substitute plenty for scarcity from Alicante to Barcelona. With water enough for wheat, for barley, for the orange tree, there is yet sufficient to make the land a cornucopia of garden vegetables and flowers, to swamp the square acre plots where the young rice plant is just peeping through the surface mud, green, tender, and confident of hot summer sunshine that will satisfy and ripen it. Thanks to the works of the past, and the honest labour of the present, Spain may well reckon on a good harvest, any shortcomings in the wheat districts of old and new Castille being made good by the western coast, and, as I hear, by Arragon and Granada—a conclusion that is not the impression of a railway journey, but of a fortnight's observation in the fields around Valencia.

The impression received at Madrid as to the light buoyant march of the Spanish soldier was confirmed by the evolutions of artillery and infantry at the latter city in the dry bed of the river: evidently the sandal, commonly worn, allows a freedom to the foot which no shoe or boot permits, as again, at Barcelona, the same springiness of gait was observable in all the troops. During the last fortnight of April our table d'hôte was served with all the vegetables and fruits, including vegetable marrow, that in June only come into season in England; and they were very abundant and cheap.

It was only on passing the Ebro at Tortosa that I saw a river full of water since entering Spain, via Bayonne. At Tarazona, a fine wine, of a cinnamon colour, "Priorato seco," was obtainable and deserves record.

The next morning I was to cross the Pyrenees, leaving Barcelona about 6 (I say about, for my chronometer was always chopping around half an hour's difference between railway and local time), and I found the railway passing a rich land full of crops of all sorts; mustard in blossom, beans in flour, wheat and barley in ear. Much of the route was through a wide valley sheltered by hills on either side, the sides often covered with store-pines, the levels with vines or corn, which in many places are irrigated. The sight of poplars showed we were going north, where, in France, they are universal, but which I had scarcely seen in Spain. Olives were still abundant, but the great olive and orange district had been left behind in the valley of Valencia.

The railway terminates at historic Gerona, where breakfast was obtainable at 10 o'clock, and although pestered to take my diligence-ticket at Barcelona—"or I might not get a place the same day"—I had the pick and got the coupé, with the mail-guard in a blouse for my companion. The diligence itself was quite a building, with compartments that might be called first and second floors, but it

was strong and fairly clean. Attached were five horses, two in the shafts, three abreast in front. Each horse had the traditional fox's brush hanging about his ears, and on his neck and collar some 20 bells. By next December the railway connecting Gerona and Perpignan is likely to be open, when few persons will care to pass ten hours on the road, instead of two hours in a comfortable carriage. However, on Friday, the 11th of May, with jingle and jolt, we pass through the ancient streets—with very musical holes in them—of Gerona. The dislocations of that passage were a new experience of life, one was surprised to find one's limbs still together at each fresh shake, but what a body or a diligence can bear in the way of shaking was fully tested. Out of the paved town the road soon improved, and the route ran alongside a river, at the foot of a rocky hill. The mountains soon show in front, the diligence slowly climbs a long hill, the travellers think of their overcoats, and the air has the bracing freshness of elevation. The breadths of corn begin to look thin and backward, but vines and olives still are flourishing in suitable aspects. During this first stage we met a couple of gendarmes, guarding six handcuffed prisoners, but otherwise vehicles or travellers were rare. At 1 o'clock, more than two hours after starting, the horses are changed, and with the horses goes the driver. This is sensible, each driver knows his horses, and the box passenger escapes the bore of talking to the same man who in England tyrannises over his coach and passengers. As the driver descended, the guard paid him his fee—three pesetas, I believe—and the new coachman took possession of his six horses, as an extra horse is put on after getting out of Gerona. Here was a coachman of a different stamp to the first: an old grey moustache, who had seen the world and gathered in his face wrinkles from all parts, most of them of the dissipated, blackguard, reckless character. But the old soldier, with herculean shoulders, knew how to drive, and conducted us safely enough over hills and valleys and river fords, that in rainy times must be impassable—one ford was over 100 feet in width. After passing Bascarra and mounting rapidly our road was, for many miles, almost level, and the track of land was good, with great numbers of olive-trees, now in blossom, yet having their wood cut out so much that under many trees the branches would have made two or three large faggots. Here, too, the new line is seen, and the navigators at work, Catalans, each in his red cap and coloured waistband, made a picturesque group. We get to Figueras at 2.45, and here we see where the mountain wall dips and allows a passage. Here, too, the old soldier yields up his seat, takes his three pesetas, and the box passenger gets another type of coachman—all speak French, and probably are Frenchmen. I would note here a beauty that is lost in the lower lands of Spain. The olive orchards below are all dusty with a dingy, thin foliage that gives them a neglected look. On the Pyrenees the leaves keep a cool grey-green tone, that when seen in a mass, as near Figueras, gives great softness to the landscape. Cactus hedges were very common, some of the plants being six feet high. Bridges over streams, now very low, granite masses, and rocky hills often wooded, are the features of this stage, and boulders, with nature generally in a savage mood, have possession of this border land. We are nearing the frontier, and pass through the gate of an abject dirty little town, offensive alike to the nose and eye. In fact, the city gate seems to be a sharp line, separating fresh sweet-smelling mountain air from the reverse, since, if blinded, the passenger would have known his entrance by the sudden change to one of his senses.

It was now five to six hours since starting, and we were still in Spain. Now and then custom house officers gave evidence of the frontier, but at the Mail guard's nod,

they allowed us to pass at different points. Proceeding a short distance further we arrive at a town where French and Spanish words are side by side over the shops. Stop for half an hour, and here the luggage is overhauled. I was hungry and left mine to its fate. A Frenchman is, in most cases, an honest fellow, and is satisfied with a franc for protecting your goods. The French fort, Bellegarde, that crowns the adjacent mountain, is a large and noble work, dominating the Pyrenees with Gallic pride.

Again a fresh coachman, and this time a good, bold whip, replacing a stolid fellow, who had let his horses crawl, with continual ejaculations of "Hee-hee-hee," and who was ever winding and unwinding his brake if the level but changed one foot in a thousand. This stage down the French side was the grandest of the journey, but it was getting dark. The road is carried in magnificent and bold curves on the mountain sides, whence the views are really grand, and the work is an engineer's triumph. There were no longer holes in the road, as on the Spanish side; we were always going down-hill, and our merry, free driver kept his six horses on at a rattling pace that exhilarated the journey, and would have satisfied good English stage-coach drivers. The six-in-hand, the bells, the swing of the curving road, the clatter and the continual cracking of the whip, combined to give to our

movement a triumphal character, and kept us continually on the *qui vive* until, past twinkling lights, under a long avenue of trees, over a drawbridge, we are in the good city of Perpignan, in La Belle France—and in reach of a newspaper with war news not a week old.

From Perpignan and Narbonne, on to Toulouse, the crops of corn in the great southern valley are undoubtedly excellent. The poor lands of the centre have a better promise than last year, and the granary of France, La Beauce, has a wonderful yield of forage, whilst the cereal crops are various; rye abundant, barley a fine plant, the wheat thick and strong, but yellow from weather influences, from which it may rapidly recover. In the West of France correspondents assure me the crops are forward and heavy. Whilst the Spanish rivers had mostly disappeared, those of France are flooded. For the first time in five years at Orleans I saw the river beds covered.

From present appearances France is likely this year to get a surplus of wheat—three to four million qrs.—for export or reserve, a result dependent on the next six weeks.

To-day the Paris corn market remained dull for wheat and flour.

Spain, May 10th, 1877.

THE ISLINGTON HORSE SHOW.

The fourteenth annual show of horses commenced, as usual, on the Saturday in the Derby week with the hall got up as a hall should be when a miraculous haul is expected. The novelties this year were docking the hunters in two classes of their fourth prizes; a gong in the centre of the ring to muster the classes, which startled some of the nags as it tolled the knell of others, when the secretary, with a flourish worthy of imitation by the renowned Tom Codlin and managers of all other shows who have found the dinner bell a failure, struck it with a dramstick, and a collection of racing cups, the oldest being lent by Sir Watkin, which was won by Spot, a horse of his grandfather in 1731, when Welshmen would sing, "Good Sir Watkin is our king, and his son is prince of Wales." If Sir Watkin does not set more value on cups than we do on empty bottles we shall be glad to exchange with him as we have one dated 1738, which as a curiosity must be more valuable than silver, or we would willingly lend it to the Agricultural Hall Company next year should they have a bottle show, with a pair of very old top boots, supposed to be those of the jockey who rode Queen Anne's horses Pepper and Mustard, a collection of which would be very interesting to sportsmen. A little after ten Lords Shannon, Waterford, and Valencia commenced judging the weight carrying hunters, a class of 37 including those sick and on leave, no easy or enviable task, nor must we be surprised, in this age of show and masquerade, when even our hatter cannot tell whether his own build is superfine, double superfine, the best, or the very best without a peep at the lining, if a prize horse, made up like a full blown puff, should now and then turn out like the widow of the Marquis of Granby whom Mr. Weller took for better or worse and found a deal worse than he took her for. As there is as much difference of opinion about horse flesh as there is about many other things in this United Kingdom we must not wonder if some of the verdicts were not quite approved of by the public while others appeared to them incomprehensible, and many thought as we do that better horses were turned out than remained in the ring. Then owners of prize nags who were sure of a first, second, or a third prize on seeing their

horses sent empty away looked, "I can't believe it," as much as we should if some one were to leave us just clear six hundred pounds a-year. Still we admire the judges for taking a line of their own, which they evidently did regardless of previous decisions as all were supplied with catalogues. If judges would always do the like there would be no crying out for champion classes or disqualifying nags from winning the same prize twice and thus letting in the second best, which is not the way to improve, but letting the best win as long as he can, and "Eclipse first" is more attractive than "the rest nowhere." Change the judges oftener, say we, get new blood, and don't put an old hand on to lead the young ones. The weight carriers were not a grand lot but a good one, with many smart nags and some well-known prize-takers, such as that model of a weight carrier, Winder, the second here last year, and the first at the Royal Show, Rossington, the first at Manchester this year, and showing more hunting form and quality here than anything in the class, though the good looking Colonel is almost the Edwinstowe nag's equal in form, but he goes rather stiff behind. The Colonel was the first four-year-old here last year, beating Mr. Hutchinson's Glengyle, who, at Skipton in Craven, galloped away from the brown, and all Yorkshire, in a style that a show horse is seldom seen to go, and we have been watching the rings throughout the country for the last eighteen years, till, at times, we begin to think we have got into a whirl without end, as the Ancient Mariner found his waltzing with Charybdis to be. Mr. Hornsby's prize nag, Jericho gets neither money nor ribands, and Mr. Harvey Bayley's Haymaker and Mr. Starkie's Staghound, both powerful horses, fare no better; with Mr. Holmes' chestnut by Theobald, Mr. Clemitson's Light-Heart, Mr. Darrell's Sutton, Mr. Loder's Half-and-Half, Mr. Barker's Maltonean, and Mr. Hutchinson's Negro—all showing breed, but would have done better if they had gone for less weight. Mr. Billington's handsome black brown Q.C., by the Lawyer, fares better, being highly commended, though his legs show that he has not been kept to look at, *seems* being honourable to a hunter and a soldier; while, from the same stable is *Loyola*.

another good horse of the same colour, but charger-like in his forehead, who is on the losing side with Mr. Cooper's St. George, which wants time to furnish. But there is a well-put-together, compact-built chestnut that the judges take to, though he lacks quality, and by the side of Rossington looks more like a provincial than a swell of the first water. But it is over, for Golden Drop is headed the blue riband, and his name is up, and may go from Ilington to the world's end, as may your own, gentle reader, if you wish it, and will pay the bill-sticker. We have no doubt left out more than one nice nag, and some that wanted a box of popular pills of forty years ago, which professed, if persevered with, to turn wooden legs, not into cork ones, but real flesh and blood. This class took one hour and forty minutes to judge, which was melancholy, slow work, and we think the judges would have got on much quicker had they drafted more at the first start. But time, like old Sally in "Oliver Twist," is going fast and we must get on to the second lot without condition as to weight, Wild Wind. the winner, being a light corky brown, the second, Barry, a neat, taking, old fashioned bay, but rather a high round goer; while the third, Brilliant, looked to us a neat hack, and would no more bear a comparison with Glengyle, Valdarno, and several other nice nags, than a mummy would with Hyperion. This was an incomprehensible verdict. Rossington was entered in this class also, but having won a third as a weight carrier was not allowed to compete, and we think it is a great pity horses are entered in more than one class, as it makes it very tame to see the same come in the ring to compete in class after class.

The four year olds made a fair show with as neat hunting like horse, with plenty of quality and action as any one would wish to see, in Sir George, a bay, sixteen hands high by Theobald, out of a mare by Orpheus, sires that we have noticed often in the columns of the *Mark Lane Express*, the second and highly commended being moderate nags, while Mr. Musgrave's prize mare Triumph looked light and delicate. In the hunters not exceeding 15-2 and without condition as to weight, a noble lord, well known in the ring, thought with many more, that Cardinal, a very clever nag, ought to have beaten Hidalgo, a cobby, smart little horse, but as the owners know one another, they will, no doubt, allow their horses to fight it out in another ring. There were several neat ones that, like Mr. Coggin's Unfortunate Mary Ann, did not get enough to pay for their Veterinary Certificate, for Caesar's horse, and his ox, are not above suspicion, whilst unsoundness and the plague exists. Lord Cole, Captain Baillie, and Mr. W. H. Cooper now took the riding horses of any height exceeding 15-2 hands with fine action and quality, among which were some good looking horses, but nothing extraordinary or very captivating; the fine action which is essential being oftentimes as artificial as old Brown's grin and his teeth. The next class was the roadster stallions which, though numerous, had but a few smart trotters in, as many had abominable shoulders, and as a class were decidedly not up to what we have seen at the hall, though the first prize, Star of the East, belonging to the Stand Company, is a roadster of nice form with good shoulders and action. The remaining classes are to be judged on the Monday which, by what we could see of them in their stalls, appeared to be fairly represented. There are some oriental stallions, but the boxes where they stood were dark and not over roomy, so we could not say what they were like. The show is on an average with those of the last four or five years, but if we took the first four which went for the cup as the best in the yard it decidedly would not be. £400 was offered for Sir George, the winner of the cup.

PRIZE LIST.

Hunters-weight carriers.—First prize, £60, H. Ford, Leamington (Golden Drop); second, £30, J. Shepherd, Beverley (Colonel); third, £20, T. H. D. Bayley, Edwinstowe, Ollerton (Rossington). Highly commended: H. B. Montgomery, Lyndhurst (Arbitration). Commended: A. H. Billington, Ashford, Kent (Q. C.); G. Thomas, The Heath, Cardiff.

Hunters without condition as to weight.—First prize, £60, H. V. N. Pole, Cirencester (Wild Wind); second, £25, W. Crawshaw, Newnham, Gloucester (Barry); third, £15, W. Gilbey, Elsenham Hall, Essex (Brilliant). Commended: A. Mint, Chigwell (Annalon).

Hunters, four years old.—First prize, £50 and cup, F. P. Newton, Norton, Malton (Sir George); second, £25, W. Benton, Earith, Hunts (Bay).

Hunters not exceeding 15 hands 2 inches, and without condition as to weight.—First prize, £40, J. Hornsby, Grantham (Hidalgo); second, £20, T. D. H. Bayley (Cardinal).

Riding horses, of any height exceeding 15 hands 2 inches, fine action and quality essential.—First prize, £20, G. Cox, Theobalds Farm, Stockwell (Borealis); second, £10, Mrs. Hutton, Upper Berkeley-street, W. (Coronet).

Roadster stallions, four years old and upwards.—First prize, £50 and medal, Stand Stud Company, Whitefield, near Manchester (Star of the East); second, £15, G. Wilberforce, Thornton, Pocklington (Sir Alfred). Highly commended: R. S. Budgett, Ealing Park, Middlesex (Shakespeare). Commended: J. P. Coker, Walsingham, Norfolk (Norfolk Champion); T. Benton, Earith, Hunts (Tiger).

PLEURO-PNEUMONIA AND FOOT-AND-MOUTH DISEASE.

Dr. BURDON SANDERSON, F.R.S., contributes to the *Journal of the Royal Agricultural Society* the following report on the "Progress of the Investigations into Pleuro-pneumonia and foot-and-mouth disease, now being conducted at the Brown Institution."

PLEURO-PNEUMONIA.—As already reported in Vol. XII. Part II., the experiments on pleuro-pneumonia were not begun till the end of August, when the animals were in perfect health and in as good condition as when they arrived at the Institution.

The first animals subjected to experiment were two yearlings. In one of these, the exudation liquid, with which the lungs of diseased animals in the developed stage of the disease abound, was injected into the circulation. The liquid was used in an entirely undiluted state, and was derived from the lungs of animals just slaughtered. In performing the operation, the greatest care was taken to avoid the entering of the infecting liquid into the cellular tissue. The other animal was inoculated subcutaneously by injection into the cellular tissue. This case was also carefully watched. No effects were observed except slight primary swelling at the seat of inoculation.

On the 3rd of November a good opportunity offered for the inoculation of a greater number of animals; liquid of the same kind was used, and was injected into the circulation of three animals, viz., 2 two-year-olds and the yearling which previously had been inoculated in the cellular tissue and had continued throughout in perfect health. On the same day a cow was inoculated in the way ordinarily adopted for prophylactic purposes, viz., in the tail. In this case slight swelling and tenderness ensued about the fourth day. The swelling increased very slowly up to the tenth day, after which it began to subside. But after the fourteenth day signs of softening appeared at the seat of the puncture, and eventually a small abscess was formed which corresponded exactly with the line of puncture by the needle. Since that period the process has gone on in the neighbouring tissue, so that at present the end of the tail, from a little above the seat of the inoculation is undergoing slow necrosis. It is further to be noted that the swelling, up to the

present time, has not extended to any distance from the seat of disease, and that the animal is still in perfect health and fair condition.

On November 10, a calf nearly two months old was inoculated by injection into the venous system, in the same way as has been already described. There was in this case some local reaction, lasting for over a week, a circumstance probably attributable to the greater difficulty of performing the injection without interfering with the tissues in the neighbourhood of the vein. There has, however, been no general disturbance of the system.

Although I am not able to express an opinion as to the main question, it is worth while pointing out that the present experiments show in the most convincing manner, that not only subcutaneous inoculation with diseased material can be performed without danger, if the necessary precautions are used, but that the more serious operation of injecting pulmonary exudation liquid into the circulating blood, is not attended with any immediate results.

FOOT AND MOUTH DISEASE.—The experiments on foot-and-mouth disease were begun early in June. In the order of dates they are as follows:—

1. On June 12th, two cows were inoculated with saliva, collected fresh from diseased animals at Deptford; the mode of inoculation employed was by scarifying the gums.

2. On the 22nd of June, the same animals were again operated on by submucous puncture, the material employed being diseased epithelium taken fresh from unruptured vesicles.

3. On the 29th, the same two cows were fed with hay which had been steeped in the saliva of diseased animals. It was given within about three hours after its collection.

4. On July 11, the same method of inoculation as in experiment 1 was again employed for the infection of two calves.

5. On Aug 3, the same calves had their gums again scarified and saliva applied, and were then fed with a small quantity of hay soaked in the saliva of diseased animals.

6. On the 15th of August they were again fed with hay wet with the saliva of diseased animals.

7. In the following instances infection was attempted by the method of subcutaneous injection of saliva, in addition to the other modes of operating, in the animals referred to:—

In experiment	One animal.
1	3
"	4
"	5

8. On Oct. 28, the young calf, two months old, was injected subcutaneously with saliva.

9. The exudation material derived from the matrix of a diseased hoof was mixed with neutral and non-irritating saline solution, and injected subcutaneously in three animals, each receiving three separate punctures, viz., one in the ear, the second in the perineum, and the third at the border of the hoof in the heel of the fore-foot.

The general result of these experiments has been, that in every instance, without exception, the effect of subcutaneous puncture has been to produce a limited abscess, containing a slough, with scarcely any extension of inflammation to neighbouring parts. In the case in which the punctures were made at the border of the hoof, no effect could be observed.

With reference to the general question of the communicability of the disease, the results must as yet be regarded as negative.

It is proposed to continue the investigation as follows:

As regards foot-and-mouth disease, the experiments will be continued on the same plan, but new methods of infection on other animals will be tried.

As regards pleuro-pneumonia, we propose

1. To repeat on those animals that have not yet been used for experiments on pleuro-pneumonia the injection into the circulation.

2. To repeat on some the subcutaneous injection.

3. To subject animals previously tested by injection to the inhalation of fresh dried material into the lungs.

4. To test the influence of cohabitation, by introducing some of the animals already experimented on by the other methods of infection referred to into stables occupied by diseased animals; and

5. To have some of the others slaughtered, for the purpose of ascertaining whether or not, in the absence of any appreciable signs of infection, the lungs or other internal organs exhibit any latent changes, corresponding to undeveloped stages of the disease.

POPULATION OF THE UNITED KINGDOM.—The Registrars' Returns, which have now been completed for 1876, show that in that year the birth rate in the United Kingdom was 34.8 per 1,000 of the (estimated) population; in England the rate rose to 36.5, and in Scotland to 35.9, but in Ireland the registers show only 26.4 births per 1,000 persons living. The returns for Scotland state that 8.6 per cent. of the births in that country were illegitimate; in the mainland rural districts as many as 10.5 per cent. A new Return now introduced, relating to the eight principal towns of Scotland, shows that in 1876 the ratio of illegitimate births to the number of the possible mothers of such children (*i.e.*, unmarried women, including widows, between 15 and 45 years of age) ranged from 1.66 per cent., in Edinburgh to 2.57 per cent. in Aberdeen; it was 2.31 per cent. in the great city of Glasgow. The death-rate in the United Kingdom in 1876 was as low as 20.4 per 1,000 persons living; 21 per 1,000 both in England and in Scotland, but only 17.4 per 1,000 in Ireland. The number of persons married in 1876 in England was higher than in any year except 1873 and 1874, but the ratio, which was 16.6 per 1,000 of the population, showed a slight further decline from the high ratios of 17.5 and 17.6 in those two years; in Scotland the number for 1876 has only once been exceeded—namely, in 1873, but the ratio, which was 15 per 1,000, exceeded the last ten years' average, though it was not quite up to the high rate of 1873 and 1874. In Ireland the ratio of last year is returned at a fraction below 10 per 1,000, or a little short of the average. The marriage rate in England in 1876 ranged from 10.2 per 1,000 in extra metropolitan Middlesex, and 11.6 in Cornwall and Herefordshire, to 19.3 and 19.6 in Nottinghamshire and Lancashire; the marked decline in the marriage rate in Cornwall is noted as reflecting the depression of mining industry in that county. Dr. W. Robertson, who signs the report for Scotland, considers that the marriage returns for that county in 1876 may probably be held as an indication that there was a fair amount of commercial prosperity, and that the circumstances of the people at large were not so affected by want or poverty as to deter them from matrimony. The 1,154,631 births in the United Kingdom in 1876 were more by 477,722 than the deaths, this excess of births over deaths being nearly 92,000 greater than the excess in the preceding year. This natural increase was distributed thus: 377,156 in England, 52,627 in Scotland, and 47,930 in Ireland. The population of the United Kingdom, which exceeded 33 millions in 1876, has not now to sustain such a large emigration as formerly, and the Board of Trade Returns state the excess of emigration over the recorded immigration in 1876 at less than 47,000 persons. Our population appears to be increasing faster than usual.—*The Times*.

AUSTRALIAN GUANO ISLANDS.—Australian papers state that the Government of Western Australia have granted the exclusive right to remove guano from off the Laccpede Islands to Messrs. Poole and Co., of Melbourne, for a definite period. Several vessels loading at these islands were wrecked in a recent hurricane. *The Perth Inquirer* says:—"The public are still left in doubt as to the result of the correspondence which passed between Mr. Lord, Consular agent at Melbourne for the United States of America, and his Excellency Governor Robinson, with reference to the claims to the ownership of the Laccpede Islands, set up by Mr. Lord on behalf of the United States, and which was sent home for the information of Her Majesty's Government. Although not doubting for a moment our right to the possession of these islands, a misgiving has arisen in some quarters which should be dispelled as soon as possible."

CHINESE TREATMENT OF PLAGUE.—Mr. A. Davenport, in his account of the recent Yunnan Mission, states that the ancient city of Yunnan-fu and also Ta-li-fu have also, since the Tai-ping rebellion and invasion, been cursed with an epidemic disease resembling the plague. It is called the symptom disease, in consequence of the critical enlargements of the lymphatic glands at the armpits. Sometimes it attacks one side of a street. It first kills animals, and then the population, if they have not profited by that warning. The treatment consists in supplying the patient with a jar full of water to drink, and leaving him quiet in his state of stupor, only rousing him once a day by poking him with a long pole through the window. But, notwithstanding the "treatment," the people say that this and other similar novel diseases have caused as great a loss of life as the rebellion itself.

BATH AND WEST OF ENGLAND SOCIETY. CENTENARY EXHIBITION AT BATH.

The hundredth meeting of the Bath and West of England Agricultural Society has, taking all things into consideration, been the most brilliant and successful that has ever been held by the Society. As a show we believe it has been unequalled in the annals of the Society, and we are glad to see that the attendance has only fallen short of that at Bristol. The lamentable accident, the falling of Widcombe Bridge, has cast a shade over the brightness of the centenary meeting, but the Society, so far from being in any respect to blame for the catastrophe, have done their part to alleviate the suffering occasioned thereby, by liberally contributing one hundred pounds to the relief fund. Baulked in their loyal desire to entertain the Prince of Wales, the Society were gratified by a visit from the ex-President of a Republic, General Grant, who visited the show on Friday. With the exception of Wednesday, the show week was blessed with brilliant weather, and the delightful performances of the bands of the Grenadiers and Royal Marines added greatly to the enjoyment of the thousands of visitors. Beside the live stock and implements, which alone we can notice in detail, there were exhibitions of dogs, poultry, butter, and cheese, and works of art. With such pleasant variety, and in such a beautiful city, it is no wonder that a grand success was attained.

THE HORSES.

There was a stronger show of horses than at Hereford, the cart horses as a lot being very good; but the hunters were not up to the Hereford form in number or quality, while the hacks and ponies, to make up for this deficiency, mustered twice as many as at the last meeting. There was a nice-sized ring, but on the incline, which is not favourable to judging horses; but this could not be avoided, as the showyard was laid out on the side of a hill. The nags this year were supplied with breast numbers, as suggested by *The Mark Lane Express* for this and many other shows throughout the country, for which, with a clear ring and no favour, it has always gone. Then there was a capital stand, but divided in the centre, so as to separate those who meet only once a year. The managers of the Royal and Yorkshire shows do not do this thing. It is one hundred and thirteen years ago since Marske was serving mares in the West Country for a few shillings each, when he was bought for a song, and afterwards stood a grand Sultan at Rycote, at a fee of £100. This was after his son Eclipse had distinguished himself, which proves that it was hard to say in those days what a horse would get, a glorious uncertainty which many owners of show horses are perfectly aware of in these days, and so send with the chance of getting the £50 and £20 for the best thoroughbred stallion for getting hunters. The first lot we saw were Mr. Brown's Ladbroke, by Oulston, out of Miss Roland, by Fitz-Roland, a Cleveland coach horse in form, on a small scale; Lord Fitzhardinge's hunting-like Red Cloud, by Maccaroni, out of Potomac, by Newminster, and which moved well on parade; Mr. Freeman's Claudius, by Caractacus, out of Lady Peel, by Orlando, very handsome and catching to the eye, but with shoulders not calculated to get hunters, though handsome enough for chargers and harness horses; and last, though placed first, Colonel Barlow's The Gunner, by Crater, out of Doubleshot, by Stockwell, a rather taking, merry-moving chesnut, with good ends and wiry limbs, but light in his middle. The next were the hunters

above four years old; and had two Yorkshire gentlemen rigged out in the costume of one hundred years ago, with coats most roomy in cuff, skirt, and pocket, and waistcoats with buttons innumerable, reaching nearly down to their knees, taken coach from the inn which overlooks the famous little race-course of Catterick Bridge and its quaint stand, for the first Bath and West of England show, to judge the riding horses, we could picture them when there on just such another nag as Michael Hardy; for Michael Hardy is an old gentleman's horse, belongs to an old gentleman, and goes like one. Some supposed he belonged to Colonel Ballard; and as there is a rule that no exhibitor shall ride his own nag—but each others' we should think by the way many were thrown—they considered the Colonel was breaking the law, which was not the case, as he was only riding for his papa. The Czar, who played second to Michael Hardy, is hunting-like, and could move as could Shakespeare, a compact-made one from the same stable; and Mr. Battam's bald-faced Hunting Horn, a neat horse with a peculiar neck, by Hunting Horn, a favourite hunting stallion at one time in the West. Mr. Trist, another well known exhibitor at the shows, came in for high commendation for Carew, a good-looking brown horse, which was second at Hereford last year, while Edinburgh, from the same stable, and a capital goer, is not noticed, nor Mr. Howell's good mover, the Clipper. Another, which can move sweetly, is Mr. Cooper's nice, but rather slack-backed chesnut, Crown Prince, which looks a pleasant horse to ride, and was second to King Charming, of Hasketon, Woodbridge, at Croydon. Mr. Battam's useful-looking horse, Brown Stout, was one of four selected and ridden of the twelve by Mr. Hutchinson—a good horseman, and who made the nags go in very different form to those who brought them into the ring. But, we say, ride one ride all of anything like fair form and action; for, if a horse goes nicely under a judge, it is so many points in his favour, and this cannot be fair to those not ridden. We have said this over and over again at different meetings, and do so now, as several exhibitors complained of their horses not being ridden, which owners of wooden ones do not. One of these was Mr. Hill, of the Hendre, Monmouth, who had a good-looking bay, four years old, by Blackthorn, out of a mare by Saunterer, who galloped well, and we think will grow into a nice nag. He was in the four-year-old class, won by Mr. Bailey's horse Precocity—a horse that was started as a prize horse by Mr. Booth and Mr. Paddison, at Croydon; and we stick to what we said then, that he is a level, lengthy colt, very straight in the croup, and more of carriage or charger character than hunting, with his hind legs a long way behind him, while a hunter's ought to lie well under. In fact, we look on him as great a pretender as the one Somersetshire backed in olden times, and hope they will not try to breed such straggling-made horses as Precocity. Mr. Pearce's thoroughbred grey, without a pedigree, is of very good form, and a free goer; and so was a neat, blood-looking bay from Ivybridge. Mr. Battams had two useful nags in Coppertop, by Gemma di Vergi, and Clapham by Clapham, and fully expected to win with the former, a well-made nag, but which only came in second. But Mr. Battams was not the only one that expected to be disappointed. There were a dozen in the class, and nothing else of any great merit, as Mr. Keevil's Coun-

cillor we thought wrong in his shoulders for hunting purposes. There were eight three-year-olds, but nothing very striking, the first prize (Glyncollen) being a bay gelding, by Knight of Kara, and the second a showy brown filly of breed, Browndown by name, while the highly-commended Oak Leaf is a neat light-weight bay filly by Wild Moor. Mr. Trist and Mr. Battams had each a fair one in this class. The two-year-olds were a middling lot of eleven, and we did not think much of the winner, Mr. Butler's gelding; though the second, Brooklands, from Swansea, was deep-topped, with good limbs, and by Wild Charlie, out of Sallie, by Anthracite; Captain Festing's Young Glenmore was not wanting in form or understandings; and Mr. Pyatt's bay colt, as a sample of Claudine's get, is just what might be expected, and decidedly not hunting-like. Rapid Rhone has left his mark in Father Thames in colour and form, the first of the yearling colts or fillies, and the best looking of a poor class. There were several other roans in the class, but not by Lord Glasgow's old horse, who could gallop when in training, and that we—though he was not perfection's self—rather liked, though many said he was a coach-horse. How often do we hear at the ring side horses that can gallop called steeplechasers, coaches, chargers, or hacks by those who go for standstill horses. The second prize, Hawthorn, a brown colt by Donnington, is very handsome, and quite a dandy. The hunting brood mares were as poor a lot as we don't wish to see again, Flirt, by Blair Athol, dam by Voltigeur, being a deep-framed plain-looking mare with stiff fore-legs, and not much hunting character, while the second, Whitedown, a chestnut mare of breed, was hunting-like in her withers but not in the shoulders. There were only four others, one being a cob hackney mare, and worthy of notice if shown in her proper class. However, Flirt was awarded the prize as being the best in all the riding classes, a verdict that we do not agree with, and think Little Nobleman, the best mare or gelding above fourteen hands calculated to carry not less than twelve stone, should have had the Champion prize, as he was, with the exception of the least shortness of the neck, the most perfect and liveliest goer in the yard, and would be a star even in Rotten Row in the height of the season. He beat seven nice ones in a class of fourteen, including Mr. Harding's Master Tom, Mr. Benjafield's Gladstone, Mr. Trist's Moorhen, Mr. Downing's Little Tommy, Mr. Alleyne's Ready, and Mr. Stratton's Friar Tuck. The stallions for getting hacks were few and not grand, excepting the winner, Bête Noir, a handsome, capably topped chestnut by Marvas out of Leprosy by Mildew, which was seconded by a useful brown cobby hack, Little Tommy. The best mare or gelding above fourteen hands, calculated to carry not less than fourteen stone, was King Peter, from Kilworthy, Tavistock, which beat three other useful ones. There were several nice ponies not exceeding fourteen and not exceeding thirteen hands, which with their jockeys created the usual amount of merriment when on parade.

The agricultural stallions foaled before 1875 were a grand lot of representatives of power, with coats shining like silk, and manes as long and fine as the back-hair of Lady Godiva or Ariadne, while their great frames were covered with heaps of sleeky flesh that would indicate they had a very easy time of it, and that there was plenty in the land for Houyhnhnms, if not for Yahoos. Ten out of an entry of fourteen entered the arena, led by Mr. A. Smith's King Tom, six years' old, by Kowland, out of Darby, a nice horse, and a prize-taker at a previous meeting of the Society, Mr. Hibbard's promising brown Sultan, three years, by the Quail out of Diamond, being the next, followed by Lord Fitzhardinge's Prince of Clydesdale, six

years old, by Prince Christian, out of Darling, a thick-set mealy bay, of the Clydesdale breed, and a useful horse; but he has no chance in the show-ring with such a handsome nag as Young Sampson, who is close on his heels, and has much improved since shown at the Royal Birmingham, where he was the best stallion to serve mares in the county of Warwick. He was then Mr. Street's, who has since parted with him to Lord Ellesmere for £750, we hear, and gets the first prize as well as the champion prize for the best in all the agricultural classes. Pride of the Shires, a good-looking five-year-old, by Young England, is also from Worsley Hall, the next being Samson, a three-year-old roan, by Prince out of Smart. Then comes a dark chestnut which attracts the eyes of many, as he is well put together, with great power, and as active as a kitten; for Topsman, eight years old, is by Wonderful, out of an Emperor mare, and a Clydesdale by birth and education, consequently knowing how to pick up his feet well enough to get second honours, and, had there been bagpipes within ear, very likely the first, or he is no true Scot. Two more of the clan follow him, Lieut.-Col. L. Lindsay's Prince Albert, a bright bay by Lay Jock, out of a mare by Old Scotchman, and the next-made Earl, a bay four-year-old, by the Duke out of Venture, the property of and bred by the well-known exhibitors of Clydesdales, Messrs. E. and A. Stanford, of Ashurst Steyning; while a three-year-old roan, of Mr. Thomas, Bristol, Royal Prince by Royal Prince, makes up the number. For the best stallions foaled in 1875 there were seventeen entries, but some did not answer to the roll-call; still the twelve paraded made a very good class of which Mr. Street's Tamper—Bumper would be more to our taste—a very handsome chestnut, beautifully made, with good ends, a wonderful back and loin, and capital limbs, adorned by the silkiest hair, was made the champion. He is by England's Wonder, better-known in the show-yard as "the old strawberry roan" and is the sire of a gem of the first water in the two-year-old filly class. Topsman, a chestnut shire colt of great bone and power is by Solomon, and takes second honours, while a very nice stamp was a black, compact, active cart colt, Duke of Cambridge, by Heart of Oak, out of a mare by England's Glory; and though first at Manchester only highly commended here. A very handsome bay, Dragon, by the Duke, out of Venture, was shown by Messrs. Stanford, whose old horse, the Duke, is resting on his laurels at the Hendre, Monmouth. A lengthy, active, bright bay Clydesdale stallion, Tam O'Shanter by Paragon Tom, out of Jean by Sampson, from Badminton, and Mr. Speed's bay shire-colt by Sir Robert, and another or two, were worthy of being honourably mentioned. "Good again" were the mares and foals, or in foal, with Lord Ellesmere's Honest Lady, a light bay of great power, compact, and well put together, by Honest Tom, with foal at foot, by Samson, that was elected Queen-bee, and looked as if she led the life of one; while from the same hive, as lady-in-waiting, was the lengthy, short-legged Mrs. Muir, who is better acquainted with the etiquette of the show yard than many who honour her with a call. She is by Champion, and her youngster by Honest Tom. The highly commended Rosa Bonheur, a bright bay, is a fine, buxom old Lincolnshire mare from Lockinge Park, whose strength it is evident does not lie in her hair, for she has very little of it, and that so tightly tied round her tail that her dock appeared by the way she carried it a fixture, the same as we have seen little girls with their hair so tightly plaited and tied that they could not shut their eyes. Then a light, active Clydesdale mare, Jean, by the handsome Young Loffy, represented Badminton, and a clever brown mare Messrs. Stanford's stables, while Mr. Rose trusted Rose of England, three years old, by the Duke out of Venture, a mare of nice character.

Mr. Hubbard sent Diamond, six years old, by King of the Valley, and Mr. Hennessey that nice little cart mare, Pleasant. The best filly foaled in 1875 was "the gem" before alluded to, an iron-grey cart filly, Marshall's Princess, wonderfully put together, and by England's Wonder—"the old strawberry roan again," in fact, the Stockwell one of cart stallions. The second prize filly was a big one by the General, out of Pleasant, by Rowland, and the highly commended, a good-looking chesnut, which with some few useful ones in a class of fourteen, two being absentees, brings us to the end of the stabling.

THE CATTLE.

The only thing Bath wants is a bath. Ay! so hot it was on Monday and Tuesday, as we went through the financially successful Show that does credit to a century's growth. The Shorthorns are being judged as we approach. They are, it must be confessed by their most earnest champion, a somewhat indifferent show, especially the males. "A roughish lot the bulls" was the constant comment of their current visitors. Some looked best tied up, some best on parade. It is perhaps our being met first by the old bulls that damps our admiration for Telemachus 10th, bred by the Marquis of Exeter, who is but a mean representative of that victorious name. His colour is against him to begin with, being a dirty light roan. He certainly draws himself up well, making the most of his neck and head, but although deep and thick he is short, and inclined rather to be paunchy. He is a lucky rather than a show bull, lucky in having no remarkable adversary. Some years since he might have held the gaping crowd, but we have grown saucy since then, owing to the multitude of excellent animals that have been sown broadcast through the land, educating the public eye, and filling even retired fold-yards with choice specimens of their stock; a glance at the pictorial illustrations of the agricultural literature a generation since will amply show this to be the fact. Yet there were even then in the hands of a few, occasional individuals, and even herds, whose thorough excellence old breeders will declare to have never been surpassed since. Mr. Joseph Stratton's second prize bull, Royal James, who was first at Hereford last year, and has been distinguished elsewhere, has a pleasant head and horn, and is of a good "meat for the million" sort. He is covered with flesh, but wants just that style which the use of Rob Roy will give to the thick descendants of the old Broad Hinton herd. He is getting coarse about the tail, a fault his otherwise superior sire, James 1st, has bequeathed him. It is always a disagreeable sight, and one which meets your eye at once. Japanese babes, we have read, are grown in jars to any shape, the frame and flesh following where the mould allows room to expand. Why not by the same rule keep on the youngsters of an otherwise capital type a weight of lead soft-lined with leather, the constant pressure of which would impel the too exuberant issue of bone and blubber to spread out elsewhere upon the flank and quarter. I charge nothing for the idea. For the practice in Japan on the human subject see a back number of "Temple Bar" magazine. Colonel Loyd-Lindsay's Lord Rockville, a son of this very Rob Roy's, and, if we remember well, possessing much of the old Towneley Butterfly character, was kept at home by the Cattle Plague regulations of the district, which have been suspended this very day. Mr. Hales's red Bismarck by Royal Cambridge, dam by Royal Benedict, combines in his veins the old Red Rose blood after us at Kirklevington and Warlaby. The mixture in him is yet raw, but we should be curious to inspect his progeny from cows of kindred nature. The Marquis of Exeter's Telemachus 9th, by the old bull, is an enforced absentee, as also is the Messrs. Hoskins's

Duke of Oxford 33rd, bred at Holker. Mr. St. John Ackers's chesnut roan Clovis continues steadily to improve, but is too loosely put together to be quite a show bull. Mr. Butt's Gallant Gay, bred by Mr. Jefferson, has a mild look about head and horn that suits ill his nomenclature, and a curious prominence of shoulder blade that is an ocular defect. The "highly-commended" Oxford Duke 10th has a deal of good about him. He has fine bone, and handles well, but he is inferior in so far that he runs rather to belly than back. The decisions of the judges in the next class, for the "best bull not exceeding two years of age on the 1st of June," were even more questioned than they were in the last class. The prize is won by the Beau (Lady Emily Pigot's), chiefly through consideration of his touch it is supposed; for he is yet a stripling, somewhat uneven in his proportions. He was marshalled under review, and his wide-awake attendant tutor intends resting, it was rumoured, on these laurels. There was no stain that we could notice of "black oats" upon his nose, and there was no need on this occasion of the familiar shooting-jacket flap. "There's a something in the lad's eye as tames them all," a bailiff remarked to us lately of a cowman who managed amiably and easily a couple of bulls, which previous to his advent to the farm were fed over the wall. Judges, too, should be wary of such mesmeric influence. Mr. St. John Ackers's second prize bull, Prince of Georgia, has a deep body, well clothed with soft hair, and a good head. Mr. Stratton's Pearl Diver, "not so dusty," his owner thought (how could he be, fresh from the depths of the ocean?) gets no notice. Mr. George Garne's Thorndale Geneva excels in flesh and hair, but is no better off upon the prize-list. Another Telemachus, from Burghley House, by his vacant stall, suggests again the damage this exhibition suffers through the transport inhibition. But about Mr. Willis's Rear Admiral there is quite an indignant gathering of men, capable to judge, too, who declare he should certainly have been placed at the head of the poll. He is a level, long animal, of neat character, but smooth and bare. His attendant assures all that his charge carries, in its due season, the thickest of coats, but it is upon the day of show that such ornamentation is wanted, and is, moreover, at the same moment, existent on his very next neighbour, from Priunash Park. There are too many, it is to be feared, who just listen and move on.

In the next class, "for the best bull calf, under six and not exceeding twelve months old on 1st of June," Rev. Mr. Kennard, to his astonishment, doubtless, is put quietly under the table with a white own brother to Queen Mary, a long, good backed bull, whose eclipse, we venture to think, will only be temporary. A high commendation must console him now. Mr. R. Stratton comes deservedly to the front with Carbuncle, a red son of Rob Roy's, a well grown, meaty, symmetrical calf, who is destined to be both of lofty stature and of high distinction on the stage of life. He handles sweetly, and is dressed in a sea-otter robe! All honour to the Stratton herd! for Mr. Walter comes second with Lord John, a calf bred at Alton Priors, of a thick, mellow, cobby sort, if we may borrow a phrase from the stable. Mr. St. John Ackers again is highly commended for Earl of Taunton, a wealthy-coated calf, slightly hard in touch, a son of Queen of the Georgians, the most thoroughbred looking Shorthorn, to our taste, in the aged cow class. Fifteen are entered, but there are many kept away by the cause above alluded to. In the class for the best cow-in-calf, the ungracious, Mr. Kennard, carries off the palm with Blossom 2nd, a long, well developed, meaty cow, but which, in the exercise of our critical vocation, we must pronounce not to exhibit what the eye wants in Shorthorn character. We have seen a lovely herd of very

similar fashion bred by two successive Shorthorn crosses on an Ayrshire foundation. They know quite enough at Marnhull to set this defect right in time. She has an undergrowth on the shoulder-blade which, if it could be, would be better ironed out into the neck again, from whence it has evidently come by accident, as a London footman's false calf will sometimes turn upon parade, and take up an awkward though adjoining position, where not wanted, on his leg. The second prize cow, Sir J. Smyth's, Mr. Kennard claims credit for, she having been bred out of a cow which once belonged to him, and being by the same sire as his own winning stock. She has far more real Shorthorn character than Blossom 2nd, and with a little more development in places, and less stiffness of appearance, especially about the hind legs, should have reversed position with the winner. The cow most suggestive of Teeswater origin is Mr. St. John Ackers' Queen of the Georgians, who has a fine front and barrel, only comparatively failing from the hip onwards. Her head is good, though not dished. It is impossible to know now-a-days exactly what men do mean by their technical bovine language, but the Queen's head is what we fancy Her Majesty's Opposition would term a good "strong" head. Anyhow it is pleasant to the eye, and that is the ultimate criterion both of form and colour.

In the best heifer class, not exceeding three years, our pet, Imperious Queen, is laurel-crowned again. Wealthy in coat and flesh, and having a sufficiency of blue in her beautiful tint, she is all over good, as might be expected in the grand-daughter of Mr. Carr's elegant Prince of the Empire—one of the noblest-fronted bulls ever seen. There is nothing about her majesty's carriage and countenance to justify the term "Imperious." She has a sweet head, quite Grecian in its facial line, which were her horns downbent, might pass for a capital specimen of the Red Rose type. She has, too, despite some one's diligent application of broken glass, just that suspicion of black on her horns which is not unusual in Bates cattle. She is small, for she has had to work hard in every way; but she is eminently worthy of her position, and we devoutly trust that, in the future—as was once said of Lord John Russell—"her shadow may never grow less." Rev. Mr. Kennard's Iole is again second to the Queen, as she was last year. She is a capital-developed butcher's beast, but wants the character of that charming Olga. There are several in this class absent that, from the reading of their published pedigrees, we should have liked to have seen. Lady Pigot's Rosalba, bought at Hereford from Mr. Stratton to compete and win in Ireland, gets a bare commendation here. Again, in the next class, "for the best heifer not exceeding two years old on the 1st of June," there are many absentees. But they have sent from that successful hotbed, Worsley Hall, the champion cow, bred, we delight to read—for it shows how the old strains, if adhered to, come out again—at Towneley. "The Lady"—in the great day of Towneley how familiar, in those comfortable boxes, which opened only to disclose a treasure, was that description, "Now here's quite a gentleman!" "Now there's a lady!"—is not a White Butterfly nor a Vestris. She reminds us of the winner at the Cardiff Royal Show, and of that memorable cow who, after being placed first in the cow class at the Salisbury Royal Show (the winner over thirty-nine at the Paris Exhibition being second) went to London at Christmas and won as a fat cow, being subsequently delivered of Gold Medal—a bull calf, who was sold by the ear, and lived to leave stock behind him. The Lady is compact as a drum, and shows that even the generally uneven Shorthorn may be brought in skilful hands to rival even the plump German sausage-back of the prize Devon.

Sir J. Smyth is commended for Lady Ashton, also a daughter of his second prize cow, Lady Fearhyn; Mr. St. John Ackers highly commended; and Mr. Bult is placed second with Anneth. This was a good class, the chief members of which looked very faultless in their stalls, but varied as they ever will considerably on parade. It is action that rules the roast in all classes, and well it should. A fine build incapable of moving just balances a pretty face without expression. Those experienced warriors, Lady Pigot and Mr. Stratton, in this class obtain only the barren honours of commendation. Of the best "heifer calves about six and not exceeding twelve months," Lord Sudebury's Seraphina Bella 4th, keeps up the prestige of her family, of which we know from inspection that they have a goodly store at Toddington. She is a well grown, level, stylish heifer. The second prize heifer Mr. St. J. Ackers' Third Lady Carew, looked such a darling on parade. Her touch some say is hardish, but she is exquisitely modelled, smaller as younger than the winner, and covered with nice hair; her rumps one said are low, but to our eye she is as Waraby-like in her beautiful quarter as anything on the ground. Mr. St. John Ackers should take the advice of his schools' great teacher, and send a little pig before him to tell the way the wind blows, ere he shows her again, as her hide may be expected to mellow or harden according to the weather-cock! Heavens! what an idea. It can only have originated amongst the clouds! Leaving Mr. Kennard with only a commendation, we regret to say, to suck in this class, we adjourn to the noble Herefords, of which the exhibition is very good, although as might be expected, not quite up to the mark of their native city. Mr. Taylor's old bull, who was closely second to Lord Falmouth's Devon for the champion prize is a grand specimen, and to outsiders looked the winner. He is full of character, although not quite up to Tredegar's measure; mellow, masculine, lengthy, upstanding, it would apparently be hard to find his match upon his native soil. Mr. Thomas, of St. Hilarg's representative, son of the celebrated old Horace, is second, being distanced in size at least. In the next class of fourteen candidates we are glad to find that enthusiastic breeder, Rev. Archer Clive, first with Kentchurch, a very lump of a neat, thick, meaty bull. The value of the triumph may be appreciated when we find below the names of Arkwright, Edwards, Taylor, only honoured with a high commendation. Mr. Carvantine is second with Ben Battle, a weighty youngster, not quite so even as this exhibitor's other entries—take for instance his first prize bull calf in the next class, the celebrated Helena's son, who has a charming head, plenty of mellow flesh, and carries out his quarter well. He shows thereby how a thoughtful breeder may improve as he proceeds, for it is in that point his dam fails. In the "best cow" class there are some celebrities superseded, Helena taking the pride of place. Her head is lovely, her frame great and truly built, so far as the quarter where she appears to have gone to pieces rather. This is not to be wondered at considering her career. She breeds, and moreover has won three years running the first prize at the Bath and West of England Show, having been overlooked strange to say, as a calf, although she won the premier place at the Royal the same year. She has been first three years running at the Royal, and expects to be so again at Liverpool. She is but three years and ten months old. She has besides won several local prizes. The next class of heifers, not exceeding three years, is a truly superb one. Mr. Edwards's Mabel is a marvel, especially in front. So substantial and yet so full of quality they looked as they went around the ring. Much the same may be said of the next class of yearling heifers, Mrs. Sarah Edwards being first and second with the prize calves of last year. She wins again in the heifer

calf class with a half sister to the second prize yearling, Beatrice. Next advance upon the scene the Sussex cattle, in which there is the manifestation of more improvement than in any other sort. Some suggest a cross of the Devon to have been used, both by their heads and bodies; still they manage to keep up with the old style which you may see in the illustrations of Dickens's husbandry, and other agricultural volumes of forty years ago. They are of rather a fierce disposition it was hinted. The cows by eye and horn certainly indicate a sense of women's rights, and don't thank you at all for courteous deference, whilst a bull showed his temper by taking a mean advantage of his attendant who was combing out his forehead, and gave him a triple toss in the very show yard. Still it is a good sort of cattle, being to the Devon just what the Oxford or Hampshire Down is to the Southdown sheep.

The Channel Islanders are of course always delightful to look upon, so suggestive are they of cream, over which a band of bees may rink without damage to the floor, and the mashed up saucer of strawberries. Their points, as all know from Colonel de Conteur's rules, are as varied and numerous as the whims of the rich, and we cannot attain unto them. Silver grey seems the fashion, and in the class for "best bulls not exceeding 4 years, on 1st June," Mr. Simpson is first with a couple so tinted, bearing respectively the suggestive (to the Shorthorn breeder's ears) names of Romeo and May Duke. Can it be that this gentleman, having got to the top of the tree of his ambition in this foreign sort, is about to hop into the plantation of native growth? We open our arms to receive him. He shall not fall if we can help it. Judges consider this show a good one, especially the females, but not so good as at Croydon. They look bold enough for Spain with their expressive black eyes, and we should be sorry to have to face them within a circular fence. Such leading rods, too, the men had, striped their whole length with iron ribs, and sometimes it took two with chains as well as staff to lead them. In the cow class there was no mistaking the prima donna in Mr. Fitt's Mousie, but over the second prize there was a difficulty, and ultimately two seconds were given, the cows oddly enough being so well-matched in shape and colour that they would have looked well in harness, besides excelling equally at the pail.

The cow and heifer classes were all well filled, to the tune of about fifteen each. The Guernsey bulls wore blinkers. Of their further merits we cannot report. The inside of the ear in all certainly looked golden-yellow enough. This weighty indication of rich milk in these cattle we have found to tell true also in the case of Shorthorns as well. Next following there were some large framed and symmetrical pairs of "Dairy cows, other than pedigree stock, the property of a tenant farmer in one of the three counties of Somerset, Gloucester, or Wilts,"—fine samples you could not have seen years since, before sales and railways dispersed the blue blood as they do now. The prize for the best bull, the property of a tenant farmer in one of those three counties, was adjudged to a superior white three years old, by Lord Red Eyes 4th, his dam tracing to the excellent and elegant Sugar-plum family. This bull has a pleasant head, and capital greeny-white horns, a broad back, and tremendous thighs. He is moreover very deep, and full of quality. He was bred by Mr. Savage, whose haul of near four-hundred for a Darlington bull we so well remember at the Kingscote sale. Where would this tenant farmer have stood but for access to such blue-blood males as Colonel Kingscote, and Mr. Bowling have, and the late Mr. Woodward delighted to keep? Mr. Walter Farthing was second with his Devon bull, a fact that speaks volumes for the white one's refined substance. To this breed now, the champion sort of the show, we adjourn. Where animals are so uni-

formly excellent as are the Devons upon this ground, it is no wonder that judges differ in their opinion in about successive weeks, as they have done here after Tavistock. The prizes for the best bull exceeding two and not exceeding four years old, first and second both go to Lord Falmouth. The first, who is also the champion bull of the show, is curiously named with a cruel irony "The only Jones," an appellation which, being of Celtic origin ourselves, we resent, and only wish we could pay off our indignation on the bull. He is, however, too good. He has a gentle expression which renders his head almost feminine in the distance, but which we find to be brave enough, but kindly, on our nearer approach. The meat over his rounded, deep, roller-like carcase—how it would fix and splutter before the fire! There is no handling this Devon champion in the sense of pulling a fold from his side. His skin is simply stuffed out as tight as a drum! With the exception of a slight compression of flesh in the region of the second round, there is absolutely nothing to point to. He is a noble specimen of the juicy Devon. The second prize bull is longer, more uneven, and perhaps of more masculine character than his fellow. In the yearling class Mr. Kidner's Falstaff is strong and stout, and absolutely waddles as he walks, owing to his uncomfortable breadth of beam. In the bull-calf class Mr. Walter Farthing takes first prize with a very level deep little fellow, Mr. Fryer being second, also with a good one. The small Devon calves, in fact, both male and female, were a wonder on parade—as much so as the yearling Herefords. Mrs. Maria Langdon's first prize cow has a deer-like head and excellent long body. She is uneven in the quarter. The weight of these animals must tell upon their support. The second prize cow is not so good in front. In the next class Mr. Farthing's Picotee has somewhat open horns, but a sensible countenance, and is a substantial long cow. Amongst the yearlings Mr. Farthing's Ladybird looks disfigured by her dark upstanding horns, whereas his prize keifer-calf in the next class is a perfect love, and has the sweetest of heads.

THE SHEEP.

When we come to the sheep, Mr. G. Turner accounts sufficiently for the oily Leicesters; Messrs. Swanwick and Gillett for the Cotswolds. It is enough to say that they have shown. The ewes' faces, however, were scarcely matched, and there was a diversity of wool in the same pen. The Devon longwool classes showed, some the Cotswold and some the Leicester cross. They are more acceptable upon the table than their improvers, the muscle of the native breed mixing well with the blubbery layer of the imported ram. The Romney Marsh or Kent sheep show an increased delicacy of meat. Their wool, possibly owing to the climate, is run after for its combined fine softness and length. Mr. Godwin's prize yearling ram is remarkably distinct in build from all others shown of this breed. He is comparatively low on leg, thick, cobby, and strong throughout, being well put together. His selection for this prize reminds of old breeders preferring a small closely-knit bull. Amongst the Southdowns the Prince of Wales obtains first honours over a large entry. In the next class Lord Walsingham wins first and second honours. The head of this flock looks more refined than it once was, or Sir W. Throckmorton's sheep put them out of countenance. Their neck was once assuredly shorter than it looks now. All goes, however, by comparison. They are, after all, lovely and even. Amongst the Hampshires Mr. Alfred Morrison wins as usual, his sheep running over apparently with a Southdown infusion, which affects flesh and wool, but touches not the big dark face, the hues of which are unmistakable and well kept. Amongst

the Shropshires, Mr. Pulley's lot look of lighter physical build than we have seen them, and Lord Chesham's are recovering from their over-Southdown aspect of last year. The native blood is reasserting its influence. Mr. Mansell holds his own amongst the rams with a good pair, yearling and old one, Mr. Townsend running second in both classes. One sheep exhibited has tokens in his marking of the lake-country speckled breed. The breeders of the Oxford Down are fast combining quantity with quality, and Mr. Druce takes the champion sheep prize with a rare specimen. Big, broad, well-proportioned, he is a magnificent sheep. His head is decidedly modified in shape and size from the old, somewhat coarse type. This is so much in a head that is indicative of delicate meat, provided you don't get them too feminine. This sheep is the last of three shown last year, when he came third. His two fellows have gone abroad. A Kent ram and some ewes went to New Zealand last year, and answer well there, £35 being given for the ram. A number of Exmoor and other improved mountain breeds are shown, but we fancy we do not see any so broad and oval as those exhibited by Mr. R. Smith used to be. The twisted horns of the Dorsets, so shell-like in the outward appearance of their material, are a sight suggestive of the pictures shown us in childhood of Abraham's sacrifice, and look like feeding on a racecourse rather the briery hill-side.

THE PIGS.

Amongst the pigs, Messrs. Howard have been successful with their large white boar Smart, and have selected for new blood a well formed youngster of Lord Ellesmere's in an adjoining pen. Mr. Duckering wins repeatedly the reward of his protracted porcine studies in several classes. A splendid black, small-breed sow of Mr. Sexton's by some error got entered amongst the big breed white ones, where she looks horribly unhappy with her short, contemptuous nose. Mr. Sexton's Top Sawyer, of the small black breed, has a splendid back and hams, but looks as if his feeder had given a too admiring squeeze to his chops when he was little. The proboscis is longer and the cheek more Yankee than we are used to in this breed. Mr. John Partridge shows some very nice young boars under a year old, in which we note a blending of the Suffolk and Hampshire breeds. They are very meaty and nice, and remind of Coates's sort. One pair of sows is shown devoid of hair as a rhinoceros, looking quite out of place amongst a lot whose hair is diligently cultivated. They are apparently derived from Fisher Hobbs's Neapolitan pig. There are some small white pigs, like Lord Moreton's Barrister last season with an abundant soft wig. The collection is capital throughout, but there is no decided wonder, such as occasionally crops up, to variegate the lot. Amongst the Berkshires, Mr. Stewart wins with some of his unmistakable mellow improved sort; Mr. Swanwick shows some capital wide-awake young sows; and Mr. Heben Humphrey's boars are well worthy of the projected herd-book, or rather pig-book. We were glad to see Sir William Throckmorton's ancestral breed coming so decidedly to the front again. There is nothing, after all, when wanted, like the old unalloyed, whether in pigs or port wine.

THE IMPLEMENTS.

As we gave last week a complete list of implement exhibitors, with the principal articles exhibited, to refer to every stand would be needless repetition, and we shall therefore be content to notice novelties and improvements as far as these attracted our attention, merely mentioning in passing some of the principal manufacturers' stands. Beginning with the machinery in motion, Messrs. Fowler's stand is first in the catalogue, but we did not notice

any alteration in the excellent traction engines and cultivating machinery as having been introduced since last year, although, as minor improvements are constantly being made, some small alterations may have escaped our attention. The same remark applies to the engines of Messrs. Aveling and Porter, of Rochester, on the next stand. A new traction engine was shown by Mr. W. Box, of Uffington, Faringdon, Berks. This engine is mounted on springs, the power being communicated to driving wheels by outside connecting rods from crank discs on either end of a counter shaft placed underneath the boiler. The gearing is cased-in away from the travelling wheels, and the width of the engine is less than six feet—an important feature in a traction engine. If this engine will stand the strain that its peculiar construction places upon some of its working parts, it has much to recommend it. Passing by Messrs. Wallis and Stevens' engines, thrashing machines, and corn elevators, we noticed a new cheese-making and warming apparatus invented and exhibited by Mr. A. Collins, of Stalbridge, Dorset. The heat can be regulated to any temperature, and communicated to a cheese room above the dairy. Messrs. Clayton and Shuttleworth, of Lincoln, had a large show of their well-known engines and machines. Mr. Humphries, of Pershore, Worcester, Messrs. Hornsby and Sons, of Grantham, Messrs. Tasker and Sons, of Andover, and the Reading Iron Works Company, showed their respective engines and thrashing machines. An improved vertical engine and boiler on a water-tank foundation was at work, on the stand of Mr. Hindley, of Bourton, Dorset, raising and lowering a heavy weight, checking its ascent or descent at any point with ease. Messrs. Gibbons, of Wantage, showed some newly designed horizontal steam engines. A new 6-horse power locomotive, capable of drawing a thrashing machine, was exhibited by Messrs. Ransomes, Sims, and Head, of Ipswich. On the stand of Messrs. Hayward, Tyler, and Co., of London, we noticed an 8-horse power steam engine with vertical boiler, fitted with Rider's automatic expansion gear, and feed-water heater. Messrs. Turner, of Ipswich, Ruston, Proctor, and Co., of Lincoln, Robey and Co., of Lincoln, Barford, and Perkins, of Northampton, Barrows and Stewart, of Banbury, and Garrett and Sons, of Saxmundham, showed engines and other machines, but in passing through their stands we did not notice any striking novelties. Messrs. Brown and May, of Devizes, as usual at this Show, had a great array of their engines. A new circular and band-sawing machine was shown by Messrs. Powis and Co., of London. Mr. F. W. Turner, of St. Albans, showed some newly-designed engines, and Messrs. Robbins, of Bath, Burrell, of Thetford, and Nicholson and Son, of Newark-on-Trent, exhibited engines, &c. The Savile-street Foundry Company, of Sheffield, had a new stone-breaking machine, and a new pressure blower, the latter being suitable for drying grain. Passing by the stands of Messrs. Hempsted and Co., of Grantham, Reynolds and Co., of London, and Marshall and Sons, of Lincoln, containing a variety of the machines for the manufacture of which these firms are respectively known, we come to Messrs. Riches and Watts's stand, and missed seeing their revolving gathering rake, which was not at work in the trial field till after our visit was made. A new stone-breaker, a new bone-crusher, and a new corn-crusher were exhibited by the Dunston Engine Co., of Durham. Mr. Henry Lander's new hay collector, to work before a waggon-loader, also exhibited, was absent in the trial field, and we therefore missed seeing it. The next novelty was a patent grain, rice, and seed aspirator and separator, manufactured by Messrs. Walworth and Co., of Bradford; and the aspirating middlings purifier, which we saw for the first time at Birmingham last year, was also exhibited by this firm. Messrs. Priestman's steam crane and self-acting

bucket, which we described a fortnight ago, was not at work, an accident having occurred in erecting the necessary scaffolding. This was unfortunate, as many people were curious to see this novelty at work. Mr. Walter A. Wood, of London, showed his harvester and binder, and his better known reaper and mower, both of which we saw at work in the trial field. The harvester was not worked. The St. Pancras Ironworks Co., of London, exhibited several improvements in stable fittings, amongst which were a wrought iron gutter, a new hay rack with lever and weight for the purpose of keeping the hay always within the horse's reach, and enamelled brackets for harness. There was also a capital set of fittings for a cow-house, and an iron piggery front with moveable trough, which can be filled outside the court. Messrs. Howard, of Bedford, had their usual large show of engines, implements, &c., including their new Simplex mower and reaper, which were worked in the trial fields. The reaper, which was shown first at Birmingham last year, but was not manufactured for general sale, is greatly improved since its introduction, the cam being altered in shape, and the crosshead quite new in construction. The Farmer engine was at work in the trial field, but we were unable to see it. Messrs. Harrison, McGregor and Co., of Leigh, Manchester, had a large show of their combined mowers and reapers, two of which were worked in the trial fields. A new intermediate motion to replace the cross-shaft has been introduced into their mowers and combined machines by Messrs. Pickley, Sims, and Co., of Leigh. A large array of farm carriages and implements was displayed by the Bristol Waggon Co., who also exhibited Messrs. Osborne & Co.'s Kirby and Wheeler mowers and combined machines, which were worked in the trial fields. Messrs. Hornsby and Sons, of Grantham, rest on the honours gained by their reapers at Leamington, and by their mowers at Taunton, and have not made any alterations since last year. They showed engines, ploughs, and other farm requisites as well as mowers and reapers. The Reading Ironworks Co. showed engines, thrashing machines, and horse-rakes, and Messrs. Barford and Perkins, of Peterborough, a large number of ploughs, mills, and steaming apparatuses. A steam cooking apparatus, new to England, was exhibited by Messrs. Delano and Co., of London. Messrs. Garrett and Sons, of Saxmundham, showed their well-known drills and horse hoes. A new haymaker that was entered for exhibition by Messrs. Nicholson and Son, of Newark-on-Trent, was unfortunately broken in transit. The horse-rakes of this firm have been improved, the principal alteration being the introduction of hollow-spoked iron wheels. A new ridge-and-furrow rake was also shown. On Messrs. Ransomes' second stand we noticed two new ploughs, amongst the variety of their exhibits. Messrs. Hunt and Tawell, of Earls Colne, Essex, showed their well known dressing machines, chaff cutters, pulpers, &c. Quite a novelty at the Show was the steam power digging machine, for cultivating hop-grounds, invented and exhibited by Mr. J. H. Knight, of Farnham, and manufactured by Messrs. J. and F. Howard. This is a most ingenious implement, and one that supplies a long-felt want. We fear, however, that the price is against the sale, unless to contractors, who might find it answer their purpose to have one to let out for hire in hop districts. It is a peculiarity of chaff-cutters that they are nearly always described in show catalogues as "new implements," the slightest modification in size, shape, or even paint, we imagine, being sufficient in manufacturers' opinion to warrant such a description. A new slide for adjusting cut, however, justifies the term "new" in the case of a chaff-cutter exhibited by Messrs. Bamford and Sons, of Uttoreter. Messrs. Bradford and Co., of London and Manchester, have improved their midfeather churus,

and brought out a new potato washer, which must be useful in large establishments. A great show of various farm machines and implements was made by Messrs. Corbett and Peele, of Shrewsbury. Messrs. Lowcock and Barr, of Shrewsbury, showed Emperor mowers and reapers and other machines. A new regulating reaper, which attracted attention, was that of Messrs. Burgess and Key, of London. The regulating arrangement is effected by means of a swinging cam, and by an ingenious system of gearing, the driver is able, by simply moving a lever, to vary the rate of sheaf-delivery as he moves along, as well as to carry the cut corn round the corners of the standing crop. The gearing of the rakes is outside and the knife gearing inside the main wheel, and the weight of the gearing as well as that of the driver is kept off the small wheel—a great desideratum. Mr. G. Loader, of Shepton Mallett, Somerset, exhibited his hay and corn gatherer and elevator, but we did not see it in the trial field. A new horse rake was shown by the Albion Iron Works Company, of Rugeley, Stafford. This rake is fitted with a ratchet and quadrant for emptying the load, for which a very light pressure from the foot of the driver is sufficient. In Messrs. Samuelson's well known reapers and mowers we did not notice anything fresh since last year, when, if we are not mistaken, their steel and iron welded fingers were introduced. Messrs. Holmes and Son, of Norwich, showed their prize turnip thinners, seed sheller, and seed and manure drill. Passing by several stands, we come to Messrs. Osborne's (of Liverpool) Kirby and Wheeler mowers and reapers, which are the same as last year. A steel lever corn drill was exhibited by Messrs. Kell, Meats, and Co., of Gloucester. Messrs. Coleman and Morton, of Chelmsford, and Mr. Le Butt, of Bury St. Edmund's, showed their well known implements and machines. The Buckeye mower and combined machines were shown by Messrs. Keyworth, of Liverpool, and worked in the trial fields. The excellent churns made by Mr. G. Hathaway, of Chippenham, were in long array on his stand. A combined horse hoe, ridger, and potato raiser, a most useful implement, was shown for the first time as a combination by Messrs. Vipan and Headley, of Leicester. We were particularly struck by the cheapness of this implement with all its fittings, especially as it appears to be very strong and well made. The new sheep shearing machine of Messrs. Newton, Wilson, and Co. would probably come into extensive use if sold at a price to bring it within the means of flockmasters generally. We have not noticed at previous shows a patent automatic balancing safety dog cart, introduced last year by Messrs. J. Bush and Co., of Camberwell Road, London. The safety arrangement consists in the front seat, with footboard and dash attached, being hung on pivots above its centre of gravity; if the horse should fall, the momentum, which ordinarily throws the occupants out of the cart, causes the seat, &c., to swing forward with them, and thus prevents their being thrown out. When driving, the seat is as firm and stationary as a fixture, and can only swing forward on the horse falling. Mr. Brenton, of St. Germain's, Cornwall, exhibited and worked a new iron-framed mower, and his Cornubian reaper, which we noticed last year as the only manual delivery machine which leaves the cut corn clear of the horse-track—a very important consideration. A turnip or mangrel and manure drill, new to us, though not in Mr. Brenton's district, has the appearance of a very useful implement, as there is nothing to cause the manure to clog—the great mischief of manure drilling. Mr. Bamlett, of Thirak, has fitted a new iron frame to his mowing and combined machines. Messrs. Mattison, of Bedale, exhibited and worked their reapers and mowers. Mowers and reapers were also shown and worked by Mr. W. Anson Wood, of London, and by Mr.

G. Kearsley, of Ripon. Messrs. Aggio and Stidolph, of Colchester and Woodbridge, showed their self-acting machines for dressing barley and seeds. A great improvement has been made since these machines were first brought out as corn and seed separators, by the addition of wire screens of peculiar construction. Messrs. Woods, Cocksedge, and Co., of Stowmarket, had their usual variety of steam engines, mills, turnip cutters, and horse gearing. Messrs. Williams and Son, of Rhyel, exhibited, amongst other things, their Victoria, Princess, and Britannia mowers and combined machines, which were worked in the trial fields. Messrs. Waite, Burnell, Huggins, and Co. had a number of their new Excelsior lawn mowers, made on the Archimedean principle, but without spindles—a decided improvement. We were much pleased with the easy and perfect working of these machines. Mr. G. E. Jeffery, of Stamford, exhibited his well-known hay-makers, engines, rakes, and chaff-cutters. Messrs. Rollins and Co., of London Bridge, had their usual effective display of beautifully got up American tools, and their light Hollingsworth horse rakes with spring steel teeth, and light high wheels.

SEEDS, MANURES, ETC.

Passing by the cattle food, cattle medicine, and manure stands, prominent amongst which are those of Messrs. Day, Son, and Hewitt, the Agricultural and Horticultural Association, Messrs. Farmer and Co., of Mark Lane, H. and T. Proctor, Bristol, Goulding, Dublin, and Smith and Co., Bristol (agents for the Peruvian Government guano), we come to the great seedmen's stands, which every year seem to increase in their "gorgeous array." The seedmen complained that they had the worst place in the showyard allotted to them and they certainly had one of the most distant portions on the top of the hill. But it would be hard to hide their gigantic name-boards, and at Bath these could be seen from afar.

Following the order in the catalogue, as we have done throughout this report, the first of the seed stands is that of Messrs. Edward Webb and Sons, of Worsley, Stourbridge, who had a very tastefully-arranged show of their selected cereals, Kinver Globe and Mammoth mangel, Imperial swede, and other varieties of roots, grasses, clover seeds, and manures. The prize silver cups for award at the Worsley Root Show, valued at nearly £300, were set out in tempting array. Messrs. J. C. Wheeler and Son, of Gloucester, were here, in their own district; and their stand was a very attractive one, displaying a prettily-arranged collection of grasses used in agriculture—Golden Melon, Orange Globe, and Mammoth mangel, and a large variety of agricultural seeds of all descriptions. Messrs. Carter and Co., of High Holborn, London, had, as usual, a grand stand. The exterior was gorgeous in new paint, and the striped red white and blue bunting with which the inside of the roof was lined was particularly effective. A new feature, too, was a series of oil paintings representing the crack varieties of Messrs. Carter's mangel and swedes as they grow (or should grow) in the field, the Warden and Mammoth mangel, and the Prize-winner swede amongst them. Specimens of the roots themselves were also grouped about the stand, together with a fine collection of grasses, seeds, &c. A fine collection of silver cups offered as prizes looked tempting to Messrs. Carter's customers. The splendid stand of Messrs. Sutton and Sons, of Reading, was the last we visited, and it was a very good finale to the list. It appeared at Bath with a new face, being beautifully painted outside and inside. Models of the principal varieties of roots sold by Messrs. Sutton were exhibited on brackets let into the columns which supported the stand. Inside, the grouping of the roots, seeds, cups and

grasses was admirable, and Messrs. Sutton are very fortunate in having the services of a superintendent of excellent taste. A large heap of Golden Tankard mangel gave effective testimony to their keeping qualities, and the Mammoth Red and Berkshire Prize mangel, and Champion swede were also well-represented, besides seeds of all kinds for the farm and garden, and specimens of grasses, &c. A fine set of silver cups and tankards, valued at upwards of £500, are offered for competition during next season's root shows, and these formed a glittering centrepiece to Messrs. Sutton's agricultural and horticultural museum.

THE FIELD TRIALS.

The trial fields were at an inconvenient distance from the show-yard; but at this time of year it is not easy to find pieces of rye and grass ready to be cut. The Local Committee, too, did all they could to diminish the inconvenience by engaging carriages to run to and fro between the yard and the fields at a moderate charge. The piece of rye which the reapers had to cut was light and short, and afforded no test to the capabilities of the machines. The plots given to each reaper on Monday were so small that it was impossible to get round from the first to the last in time to give any attention to each before some had finished. Axious to see the greatest novelties first, we went to where Mr. Walter A. Wood's one-horse self-delivery reaper was at work, and were pleased to see the pretty little machine making as good work as any in the field. We have an idea that this little machine, which has a cut of 3 ft. 6 in., would be very useful on those heavy lands which are laid up in eight-furrow stretches, as it would cut a stretch, and no more, in two cuts, thus avoiding the necessity of the frequent alteration in the height of the cutter bar that is necessary when one of the wheels is sometimes in the furrow and sometimes out of it. Mr. Wood had also a two-horse machine at work. Messrs. Howard's new Simplex reaper is, as previously observed, greatly improved since its first appearance at Birmingham last year. The cam was then too much bent, which caused a jerking action in the rakes, and a great strain on the crosshead, which in its turn is also altered greatly for the better. The sweep of the rakes is now smooth enough, and uncommonly well-directed for bringing the corn down to the knives. The machine did its work well, and appeared to be very light in draught, partly owing to its simple construction, and partly to the use of steel instead of iron in some of its gearing. Considerable curiosity was manifested to see how Messrs. Burgess and Keys' new arrangement for controlling the sheaf-delivery by means of their swinging cam previously described, would act, and the result was quite satisfactory. Messrs. Samuelson's well-known reaper cut and laid its sheaves in capital form. We need hardly say that good work was also made by Messrs. Hornsby's machines. The Johnston Harvester Company's machine, which has the advantage of a wrought iron frame, cut and laid its corn well, and Mr. Bamlett's strong, simple reaper also made good work. Indeed, to avoid needless repetition, it may be observed that all the reapers did the cutting in a satisfactory manner, and although there was some difference in the neatness of laying the sheaves, it would hardly be fair to draw any conclusions on that point, because after starting there was hardly time to make the necessary adjustment before the plot was finished, especially where one maker used two machines on the same plot. Messrs. Kearsley's, Williams's, and Pickaley and Sims' machines had finished working when we got up to them, but the work done was, like the rest, satisfactory. Messrs. Harrison and McGregor's combined reaper and mower was not at work on Monday, and we did not see Mr. W. Anson Wood's or Messrs. Osborne's reaper at work. Messrs. Mattison's one-horse manual

delivery reaper is the most homely-looking one that was on the ground, but made none the less good work. Mr. Brenton's one-horse machine has been already mentioned as being the only manual reaper that delivers the corn clear of the horse's track—a great advantage if people will have manual delivery machines, as some will. If there were any other machines at work that have not been mentioned above, it is really of little consequence, as the so-called trials were no trials worthy of the name. Unless a fairly heavy piece of corn that will afford some test to the capabilities of reapers can be secured, it would be better to have no reaper trials, which are of doubtful advantage to exhibitors, and a cause of waste of time to visitors. The mower trials were rather more satisfactory, although the grass, like the rye, was light; but here the visitor in search of the best machine was troubled with an *embarrass de richesses*, the merits of so many of the mowers being, as far as could be seen by the work done, nearly or quite equal. Indeed, we have more than once observed that mowers are "so much of a muchness" in the performance of their work that the attention of purchasers may be almost exclusively directed to the study of the relative draught, strength, and durability of the very numerous machines offered for their selection. The dynamometer test was not applied, and time and space alike forbid any attempt at a comparison of the various machines with regard to strength generally, and durability of wearing parts in particular. We carefully noticed the work done by each machine, and, although we cannot say that we noticed no difference, we did not see one bad piece of work in the meadows. In the absence of other tests than the work done, then, it would be both invidious and unserviceable to attempt any comparisons, and we therefore give simply a list of the mowers tried. These were the machines of Messrs. Hornsby, Samuelson, Howard, Walter Wood, W. Anson Wood, Burgess and Key, Harrison and McGregor, Osborne, Pickley and Sims, Williams, Kearley, Brenton, Mattison, Bamlett, Lowcock and Barr, Platt and Co., and the Johnston Harvester Co. Of the haymakers at work we only saw those of Messrs. Ransomes, Affleck, and H. Beare. The last-mentioned is new in the Bath district. This is a lock-action machine, and the rake-heads work behind the wheels of the machine, and extend beyond them, thus preventing the hay from being pressed after being spread. The driver sits upon the machine, and can instantly put it in or out of gear, and raise or lower the rake.

Messrs. Fowler and Howard had their steam cultivating machinery at work in a field at some distance from the show-yard.

LIST OF JUDGES.

HORSES.

AGRICULTURAL.

J. Cox, Sandridge, St. Albans.
V. B. Watts, Melcombe Horsey, Dorchester.

HUNTERS.

J. H. Hutchinson, Manor House, Catterick, Yorks.
R. Maynard, Newton Hall, Durham.

CATTLE.

DEVONS AND SUSSEX.

T. Pope, Horningham, Warminster.
H. Overman, Weasenham, Brandon, Norfolk.
G. Happer, Orfold, Wisborough Green, Billinghamurst.

SHORTHORNS.

J. Thompson, Badminton, Chippenham.
E. Wortley, Ridlington, Uppingham.

HEREFORDS.

W. S. Powell, Eglwysunyd, Taibach.
Jas. Marston, Lady Harbame, Eardiney, Hereford.

CHANNEL ISLANDS.

H. Middleton, Cutteslowe, Oxford.
James Ross, Grange Farm, Hatfield, Broad Oak, Harlow, Essex.

SHEEP.

LONGWOOLS.

J. Painter, Belgrave House, Forest Road, Notts.
T. Marrie, Croxton, Ulceby, Lincolnshire.

SHORTWOOLS.

J. Ford, Rnathon, Blandford.
J. Bryan, Southleigh, Witney, Oxon.
J. Coxon, Freeford Farm, Lichfield.

PIGS.

E. Little, Lanhill, Chippenham.
J. Smith, Henley-in-Arden, Warwick.

CHEESE AND BUTTER.

W. Clark, Bristol.
J. Hughes, Oxford.
W. J. Hutchinson, London.

HORSE SHOEING.

T. D. Broad, Broad Street, Bath.

PRIZE LIST.

HORSES.

AGRICULTURAL.

Stallion, for agricultural purposes, foaled before 1875.—First prize, £30, and champion cup, the Earl of Ellesmere (Young Sampson); second, J. F. Crowther, Knowl Grove, Mirfield, Yorks (Topman). Highly commended: J. Hibbard Chippenham (The Sultan).

Stallion foaled in 1875.—First prize, £25, F. Street, St. Ives, Hunts (Thumper); second, £10, C. Marsters, King's Lynn (Topman); Highly Commended: The Earl of Ellesmere, Worsley Hall, Manchester (Duke of Cambridge).

Mare in foal or in foal.—First prize, £15, Earl of Ellesmere (Honest Lady); second, £5, ditto (Mrs. Muir). Highly commended: Lieut.-Col. Loyd Lindsay, V.C., M.P., Lockinge Park, Berks (Rosa Bonheur). The class commended.

Filly, foaled in 1875.—First prize, £15, C. Marsters (Marshland Princess); second, £5, S. D. Woolashill, Worcestershire. Highly commended: J. Walter, M.P. (Princess).

Thoroughbred stallion for hunters.—First prize, £50, Col. F. Barlow, Hasketon, Woodbridge, Suffolk (The Ganner); second, £20, H. W. Freeman, M.D., Bath (Claudius).

Mare or gelding, foaled before the 1st of January, 1873.—First prize, £25, J. Ballard, Glamorganshire (Michael Hardy); second, £10, C. A. Tanner, Yatesbury, Calne, Wilts (The Czar).

Mare or gelding, foaled in 1873.—First prize, £25, H. J. Bailey, Rosedale, Tenbury, Herefordshire (Precosity); second, £10, G. B. Battams, Kilworthy, Tavistock, Devon (Coppertop).

Filly or gelding, foaled in 1874.—First prize, £15, W. F. Richards, Swansea (Glyncollen); second, £5, J. D. Sherston, Evercreech (Brown-down). Highly commended: H. Cooper, Ilminster (Oak Leaf).

Filly or gelding, foaled in 1875.—First prize, £15, S. Butler, Sticheombe, Marlborough, Wiltshire; second, F. Richards (Brooklands). Commended: Capt. H. B. Festing, Maiden Bradley, Bath (Young Glenmore).

Colt or filly, foaled in 1876.—First prize, £10, E. Baillie, Chudleigh (Father Thames); second, £5, E. G. Legg (Hawthorn). Highly commended: J. Norris, Franklin, Iluzham, Exeter, Devon (Poltimore).

Mare and foal or in foal.—First prize, £15, and champion cup, value £20, H. W. Freeman, M.D. (Flirt); second, £5, J. D. Sherston (Whitedown). Highly commended: J. M. Evans, Timsbury (The Duchess).

Stallion for hacks.—First prize, £25, H. W. Freeman, M.D. (Bete Noire); second, £10, V. Galliers, Leintwardine Herefordshire (Little Tommy).

Mare or gelding, above 14 hands, calculated to carry not less than 14 stone.—First prize, £15, G. Bland, Bittams, Kiltworthy (King Peter); second, £5, J. Pearce, King's Weston, near Bristol.

Mare or gelding, above 14 hands calculated to carry not less than 12 stone.—First prize, £15, E. A. Sanders, Stoke House, Exeter (The Little Nobleman); second, £5, J. Stratton (Friar Truck).

PONIES.

Mare or gelding, not exceeding 14 hands.—First prize, £10, F. F. Bladon, Rosemount Villa, Poleloe-road, Exeter (Tally ho!); second, £5, Capt. H. B. Festing (Grissel).

Mare or gelding, not exceeding 13 hands.—First prize, £10, F. F. Bladon (Taff); second, £5, W. Hawer, Seven-hampton, Highworth, Wiltshire (Gnger).

CATTLE.

DEVONS.

Bull, exceeding two and not exceeding four years old on the 1st of June, 1877.—First prize, £20, Viscount Falmouth, Tregothuan, Probus, Cornwall (The Only Jones); second, £10, Viscount Falmouth. Highly Commended: W. Ham, Whorridge, Collumpton, Devon (Victor).

Bull, not exceeding two years old on the 1st of June, 1877.—First prize, £25, S. Kidner, Milverton, Somerset (Falstaff); second, £10, Sir J. H. Heathcote-Amory, Bart., M.P. (Tempter 4th).

Bull Calf, above six and not exceeding 13 months old on the 1st of June, 1877.—First prize, £10, W. Farthing, Bridgewater; second, £5, W. R. Fryer, Poole, Dorset (The Don). Commended: Mrs. M. Langdon, North Molton, Devon (Lord Bath).

Cow in calf (or if in milk, having had a calf within six months next preceding the 1st of June, 1877).—First prize, £15, Mrs. M. Langdon (Actress 8th); second, £10, R. Cruer, Williton (Cherry). Highly Commended: W. Perry, L-w Down, North Devon (Uairymaid). Commended: W. Fryer, Poole, Dorset (Flour Ball).

Heifer in Calf (or if in milk, having had a calf within six months next preceding the first day of the Exhibition), not exceeding three years old on the 1st of June, 1877.—First prize, £15, W. Farthing (Picotee); second, £10, T. H. Ridsen, Taunton, Somerset.

Heifer, not exceeding two years old on the 1st of June, 1877.—First prize, £10, W. Farthing (Ladybird); second, £5, Mrs. M. Langdon (Tempreess 8th). Commended: W. R. Fryer (Eugenie).

Heifer Calf, above six and not exceeding twelve months old on the 1st of June, 1877.—First prize, £10, W. Farthing, (Pretty Face 2nd); second, £5, W. R. Fryer (Queen Mary). Commended: Mrs. M. Langdon (Lovely Queen 7th).

SHORTHORNS.

Bull, exceeding two and not exceeding four years old on the 1st of June, 1877.—First prize, £20, C. W. Griffin, Peterborough (Telemachus 10th); second, £5, J. Stratton, Marlborough (Royal James). Highly Commended: J. Cruse, Brandis-corner, North Devon (Oxford Duke, 10th). Commended: J. S. Ealt, Taunton (Gallant Gay); B. St. J. Ackers, Painswick, Gloucestershire (Clovis).

Bull, not exceeding two years old on the 1st of June, 1877.—First prize, £25, Lady Pigot (The Beau); second, £10, B. St. J. Ackers (Prince of Georgia).

Bull Calf, above six and not exceeding twelve months old on the 1st of June, 1877.—First prize, £10, R. Stratton, Newport, (Carbuncle); second, £5, J. Walter, M.P., Bearwood, Wokingham (Lord John). Highly Commended: Rev. R. B. Kennard, Marshull, Blandford, Dorset (Crown Prince); B. St. J. Ackers (Earl of Taunton). Commended: J. G. Attwater, Britford, Salisbury (Amos).

Cow in Calf (or if in milk, having had a calf within six months next preceding the first day of June, 1877).—First prize, £15, Rev. R. B. Kennard (Blossom 2nd); second, £10, Sir J. H. G. Smyth, Bart., Bristol (Lady Penrhyn). Highly Commended: Sir J. Ackers (Queen of the Georgians).

Heifer in calf (or if in milk, having had a calf within six months next preceding the first day of the exhibition), not exceeding three years old on the 1st of June, 1877.—First prize, £15, Lady Pigot; second, £10, Rev. R. B. Kennard (Iole). Highly commended: W. S. Gibbs, Manor House, Taunton (May Queen). Commended: C. W. Griffin (Dashing Rover); Lady Pigot (Rosalba).

Heifer, not exceeding two years old on the 1st of June,

1877.—First prize, £10, Earl of Ellesmere, Worsley Hall, near Manchester (The Lady); second, £5, J. S. Bilt (Annette). Highly commended: B. St. J. Ackers (2nd Lady Carew). Commended: J. H. G. Smyth, Bart. (Lady Ashton II.); Lady Pigot (Dainty Dame); R. Stratton (Wild Flower).

Heifer calf, above six and not exceeding twelve months on the 1st of June, 1877.—First prize, £10, Lord Sudeley, Winchesombe (Seraphina Bella 4th); second, £5, B. St. J. Ackers (3rd Lady Carew). Highly commended: W. S. Gibbs (Hebe). Commended: R. B. Kennard (Lady Marshull 4th).

HEREFORDS.

Bull, exceeding two and not exceeding four years old on the 1st of June, 1877.—First prize, £20, W. Taylor, Ledbury, Herefordshire (Thoughtful); second, £10, T. Thomas, St. Hilary, Cowbridge, Glamorganshire (Horace 2nd). Commended: R. J. Lewis, Breinton, Hereford (Little Bill).

Bull, not exceeding two years old on the 1st of June, 1877.—First prize, £25, Rev. A. Clive, Whitfield, Hereford (Kentchurch); second, £10, T. J. Carwardine, Stockton Bury, Leominster (Ben Battle). Highly commended: Mrs. S. Edwards, Wintercott, Leominster, Herefordshire (Victor); W. Taylor, Showle Court, Ledbury, Herefordshire (Tredegar 2nd); J. H. Arkwright, Hampton Court, Leominster, Herefordshire (High Sheriff). Commended: W. Taylor (Telescope).

Bull calf, above six and not exceeding twelve months old on the 1st of June, 1877.—First prize, £10, T. J. Carwardine (Anxiety); second, £5, H. N. Edwards, Broadward, Leominster (Adam). Commended: T. Thomas.

Cow in calf (or if in milk having had a calf within six months next preceding the 1st of June, 1877).—First prize, £15, T. J. Carwardine (Hilena); second, £10, W. Evans, Llandowlas, Uck, Mon. (Lady Blanche). Highly commended: T. Thomas (Rosaline); T. Nott, Letton Court, Brampton Brian, Hereford (Melody 4th). The class commended.

Heifer in calf (or if in milk having had a calf within six months next preceding the first day of the exhibition), not exceeding three years old on the 1st of June, 1877.—First prize, £15, Mrs. S. Edwards (Mabel); second, £10, W. B. Peren, South Petherton, Somerset (Queen of the Rose). Highly commended: Rev. A. Clive (Belle); Rev. A. Clive (Nanny); W. B. Peren (Lady Lottie).

Heifer, not exceeding two years old on the 1st of June, 1877.—First prize, £10, Mrs. S. Edwards (Leonora); second, £5, Mrs. S. Edwards (Beatrice). Highly commended: H. R. Hall, Ashton House, Leominster (Lady Alice).

Heifer calf, above six and not exceeding twelve months old on the 1st of June, 1877.—First prize, £10, Mrs. S. Edwards (Beatrice 2nd); second, £5, W. Taylor. Highly commended F. Platt.

SUSSEX.

Bull, exceeding two and not exceeding four years old on the 1st of June, 1877.—First prize, £20, S. Smith, Paddockhurst, Crawley, Sussex (Young Hartley); second, £10, C. Whitehead, Barming House, Maidstone, Kent (May Duke). Commended: A. Agate, Horsham, Sussex (The Duke).

Bull, not exceeding two years old on the 1st of June, 1877.—First prize, £25, Messrs. J. and A. Heasman, Angmering, Arundel, Sussex (Hereford); second, £10, A. Agate (Berry). Commended: Messrs. E. and A. Stanford, Eatons, Steyning, Sussex (Clayton).

Bull calf, above six and not exceeding twelve months old on the 1st of June, 1877.—First prize, £10, Messrs. J. and A. Heasman; second, £5, B. Mills, Horsham, Sussex (Bismarck 4th). Commended: T. A. Vickress, Horsham, Sussex (King Tom).

Cow in calf (or if in milk having had a calf within six months next preceding the 1st of June, 1877).—First prize, £15, J. and A. Heasman (Pride of Ham); second, £10, J. Braby, Rudgwick, Sussex (Bouncer). Highly commended: E. and A. Stanford (Hardy). Commended: B. Duke, Lyminster, Arundel, Sussex (Lovely); A. Agate (Honesty).

Heifer in calf (or if in milk having had a calf within six months next preceding the first day of the exhibition), not exceeding three years old on the 1st of June, 1877.—First prize, £15, A. Agate (Adelaide 5th); second, £10, E. and A. Stanford (Rosedew 2nd). Highly commended: J. Braby (Heireas).

Heifer, not exceeding two years old on the 1st of June, 1877.—First prize, £10, A. Agate (Gentle); second, £5, J. and A.

Heasman (Rosebud). Highly commended: J. and A. Heasman (Mayflower).

Heifer calf, above six and not exceeding twelve months old on the 1st June, 1877.—First prize, £10, A. Agate (Honesty Third); second, £5, J. and A. Heasman. Commended: G. Smith, Paddockhurst, Crawley, Sussex (Maria).

CHANNEL ISLANDS.

JERSEY.

Bull, exceeding two and not exceeding four years old on the 1st June, 1877.—First prize, £10, G. Simpson, Wray Park, Kigate, Surrey (Romeo); second, £5, G. Simpson (May Duke). Highly commended: Lord Poltimore, Poltimore Park, Exeter (Berger 2nd). Commended: J. C. F. Ramsden, Bushbridge Hall, Godalming, Surrey (Mohawk).

Bull, not exceeding two years old on the 1st June, 1877.—First prize, £15, H. A. Rigg, Wykeham Lodge, Walton-on-Thames (Gipsy Lad); second, £5, G. Simpson (The Pride). Commended: G. Simpson (Gipsy Prince).

Cow, exceeding three years old, in calf (or if in milk having had a calf within six months next preceding the 1st June, 1877).—First prize, £10, W. E. Fitt, Winchester, Hants (Mossie); Equal second, £5, Lord Chesham (Grisette), and G. Simpson (Luna). The class highly commended.

Heifer in calf (or if in milk, having had a calf within six months next preceding the first day of the Exhibition), not exceeding three years old on the 1st June, 1877.—First prize, £10, G. Digby, Wingfield Digby, Sherborne Castle, Sherborne, Dorset (Dairy Maid 2nd); second, £5, G. Simpson (Promise). Highly commended: G. Simpson (Pretty Maiden). Commended: G. Simpson (Pretty Girl).

Heifer, not exceeding two years old on the 1st June, 1877.—First prize, £10, H. A. Rigg (Firt); second, £5, G. Simpson (Hilda 2nd). Highly commended: G. Simpson (Sansuril). Commended: G. Simpson (Belle Blanche).

GUERNSEY.

Guernsey bull, exceeding two and not exceeding four years old on the 1st June, 1877.—First prize, £10, W. E. Fitt (Farlad); second, £5, H. Compton, Manor House, Minehead, Lyndhurst, Hants (No. 5, Cloth of Gold). Highly commended: J. James, Les Vauxbelets, Guernsey (Royal Duke).

Bull, not exceeding two years old on the 1st June, 1877.—First prize, £15, R. N. G. Baker, Heavitree, Exeter, Devon (Prince Charlie).

Cow, exceeding three years old, in calf (or if in milk, having had a calf within six months next preceding the 1st of June, 1877).—First prize, £10, W. E. Fitt (Lily); second, £5, H. Compton (Dewdrop).

Heifer in calf (or if in milk, having had a calf within six months next preceding the first day of the exhibition), not exceeding three years old on the 1st of June, 1877.—First prize, £10, R. N. G. Baker (Dairy Maid); second, £5, H. Compton (Buttercup). Highly commended: J. James (Duchess). Commended: R. N. G. Baker (Young Nancy); W. H. Walrond, New Court, Topham, Devon (Princess).

Heifer, not exceeding two years old on the 1st of June, 1877.—First prize, £10, R. N. G. Baker (Crocus); second, £5, H. Compton (Amy). Highly commended: R. N. G. Baker (Daisy). Commended: R. N. G. Baker (Lady Jane); J. James (Maggie).

DAIRY CATTLE.

Pair of dairy cows, other than pedigree stock, the property of a tenant farmer in one of the three counties of Somerset, Gloucester, or Wilts.—First prize, £30, G. Gibbons, Tunley Farm, Bath; second, £10, C. H. Pyatt, Victoria Park Farm, Bath.

Dairy cow, other than pedigree stock, the property of a tenant farmer in one of the three counties of Somerset, Gloucester, or Wilts.—First prize, £10, G. Gibbons; second, £5, C. Taylor, Stanton Prior, near Bristol (Star).

Bull of any breed (the property of a tenant farmer in one of the three counties of Somerset, Gloucester, or Wilts), that shall have been the property of the exhibitor for at least six months next preceding the first day of the Show, and during that time have served at least twenty cows.—First prize, £10, E. Paget, Burnsett, Bristol (Lord Normandy); second, £5, W. Farthing (Master Willie). Commended: C. H. Pyatt.

SHEEP.

LEICESTERS.

Yearling ram.—First prize, £10, G. Turner, jun., Northampton; second, £5, G. Turner, jun.

Ram of any other age.—First prize, £10, G. Turner, jun.; second, £5, G. Turner, jun. Highly commended: G. Turner, jun.

Pen of five yearling ewes.—First prize, £10, G. Turner, jun.; second, £5, G. Turner, jun.

COTSWOLDS.

Cotswold yearling ram.—First prize, £10, J. Gillett, Charlbury, Oxon; second, £5, J. Gillett. Highly commended: Ditto. Highly commended: Ditto. Highly commended: Ditto. The class commended.

Ram of any other age.—First prize, £10, R. Swanwick, Cirencester; second, £5, R. Swanwick. Highly commended: Ditto; R. Jacobs, Burford, Oxon. A very good class indeed.

Pen of five yearling ewes.—First prize, £10, J. Gillett; second, £5, ditto.

DEVON LONGWOOLS.

Yearling ram.—First prize, £10, Sir J. H. Heathcoat-Amory, Bart., M.P., Tiverton; second, £5, R. Corner, Williton, Somerset.

Ram of any other age.—First prize, £10, R. Corner, Tiverton, Williton; second, £5, R. Corner. Highly commended: R. Corner. Commended: Ditto.

Pen of five yearling ewes.—First prize, £10, R. Corner; second, Sir J. H. Heathcoat-Amory, Bart., M.P.

ROMNEY MARSH OR KENT.

Yearling ram.—First prize, £10, J. S. S. Godwin, Maldstone, Kent; second, £5, H. Riden, Lymington, Hythe, Kent.

Ram of any other age.—First prize, £10, H. Riden; second, £5, ditto.

Pen of five yearling ewes.—First prize, £10, J. S. S. Godwin; second, £5, H. Riden.

SOUTH DOWNS.

Yearling ram.—First prize, £10, H. R. H. The Prince of Wales, Sandringham; second, £5, H. H. Penfold, Selcay, Chichester, Sussex. Highly commended: Lord Walsingham, Merton Hall, Thetford, Norfolk. Commended: H. Gorrings; W. Riden; Sir. W. Throckmorton, Bart., Buckland, Faringdon, Berks.

Ram of any other age.—First prize, £10, Lord Walsingham; second, £5, ditto. Highly commended: H. H. Penfold. Commended, ditto; H. Gorrings (Portsmouth); R. Neville-Grenville, M.P.

For the best pen of five yearling ewes.—First prize, £10, Sir W. Throckmorton, Bart.; second, £5, H. R. H. The Prince of Wales. Highly commended: H. Gorrings.

Hampshire Down yearling ram.—First prize, £10, A. Morrison, Tisbury, Wilts; second, £5, A. Morrison. Highly commended: J. Barton, Basingstoke, Hants. Commended J. Read, Homington, Salisbury, Wilts.

Ram of any other age.—First prize, £10, A. Morrison; second, £5, J. Read. Highly commended: J. Barton. Commended: J. W. Brown, Uffcott, Swindon, Wilts.

Pen of five yearling ewes.—First prize, £10, W. Parsons, Basingstoke; second, £5, J. Rigg, Sevenoaks, Hants.

SHROPSHIRE.

Yearling ram.—First prize, £10, T. Mansell, Wellington Salop; second, £5, H. Townsend, Nuneaton, Warwickshire. Highly commended: Lord Chesham.

Ram of any other age.—First prize, £10, T. Mansell; second, £5, H. Townsend. Highly commended: Lord Chesham. Commended: J. Palley.

Pen of five yearling ewes.—First Prize, £10, Lord Chesham; second, £5, F. Bach, Onibury, Craven Arms, Salop. Commended: J. Palley, Lower Eaton, Hereford.

OXFORDSHIRE DOWNS.

Yearling ram.—First prize, £10, J. Treadwell, Upper Winchendon, Aylesbury; second, £5, A. Brassey, Heythorp Park, Chipping Norton, Oxfordshire. Commended: G. Adams, Piddell Farm, Faringdon Berkshire. The class generally commended.

Ram of any other age.—First prize, £10, A. F. M. Druce, Twelve Acre, Eynsham, Oxon; second, £5, G. Adams.

Pen of five yearling ewes.—First prize, £10, A. F. M. Druce; second, £5, G. Adams. Highly commended: A. Brassey. Commended: J. Treadwell, A. Brassey.

SOMERSET AND DORSET HORNS.

Yearling ram.—First prize, £10, H. Farthing, Nether Stowey, Bridgwater, Somerset; second, £5, ditto. Highly commended: J. Culverwell, Clavelhay, Bridgwater, Somerset. Commended: E. G. Legg, Coombe Down, Beaminster, Dorset.

Ram of any other age.—First prize, £10, H. Farthing; second, £5, J. Calverwell. Commended: J. Calverwell, H. Farthing.

Pen of five yearling ewes.—First prize, £10, E. G. Legg; second, £5, W. S. Hall, Druce Farm, Puddletown, Dorchester. Highly commended: W. S. Hall. Commended: J. Calverwell.

XYMOOR AND OTHER MOUNTAIN BREEDS.

Ram of any age.—First prize, £10, E. Bach; second, £5, Lord Poltmore. Highly commended: Mrs. M. Langdon.

Pen of five yearling ewes.—First prize, £5, Lord Poltmore; second, £3, ditto.

PIGS.

Boar, large breed, above one and not exceeding two years old on the 1st of June, 1877.—First prize, £5, J. and F. Howard, Britannia Farms, Bedford; second, £3, R. E. Duckering, Northorpe, Kirtton Lindsey, Lincoln.

Boar, not exceeding one year old on the 1st of June, 1877.—First prize, £5, Earl of Ellesmere, Worsley Hall, Manchester; second, £3, R. E. Duckering.

Breeding sow in farrow, or exhibited with her litter.—First prize, £5, Earl of Ellesmere; second, £3, R. E. Duckering. Highly commended: J. and F. Howard (Duchess 18th); J. and F. Howard (Duchess 2nd). Commended: R. E. Duckering; A. Ingram, Blandford, Dorset.

Pen of two breeding sows, not exceeding nine months on the 1st of June, 1877.—First prize, £5, R. E. Duckering; second, £3, Earl of Ellesmere.

Boar, small breed (black), above one and not exceeding two years old on the 1st of June, 1877.—First prize, £5, G. M. Sexton, Wherstead Hall, Ipswich; second, £3, Rev. W. Hooper. Commended: Earl of Portsmouth, Eggesford House, Wembworthy, North Devon.

Boar, not exceeding 1 year old on the 1st of June, 1877.—First prize, £5, and second, £3, J. Partridge, Bow, North Devon. Highly commended: G. M. Sexton. Commended: Earl of Portsmouth.

Breeding sow in farrow, or exhibited with her litter.—First prize, £5, Earl of Ellesmere; second, £3, Earl of Portsmouth. Highly commended: W. F. Collier, Woodtown, Horrabridge, South Devon. The class highly commended.

Pen of two breeding sows, not exceeding nine months of age on 1st of June, 1877.—First prize, £5, J. Partridge; second, £3, G. M. Sexton. Highly commended: Earl of Portsmouth. Commended: R. Coraer, Torweston, Williton, Somerset; Earl of Portsmouth; J. Partridge, Hillerton House, Bow, North Devon; W. Tremaine, Poleau, Grampound, Cornwall.

Boar, small breed (white) above one year and not exceeding two years old on the 1st of June, 1877.—First prize, £5, R. E. Duckering; second, £3, Lord Moreton, Tortwor Court, Falsfield. Highly Commended: G. M. Sexton.

Boar, not exceeding one year old on the 1st of June, 1877.—First prize, £5, G. M. Sexton; second, £3, Earl of Ellesmere.

Breeding Sow in farrow, or exhibited with her litter.—First prize, £5, R. E. Duckering; second, £3, R. E. Duckering.

Breeding sow in farrow, or exhibited with her litter.—First prize, £5, R. E. Duckering; second, £3, R. E. Duckering. Highly commended: Earl of Ellesmere; Lord Moreton. Commended: Lord Moreton.

Pen of two breeding sows, not exceeding nine months old the 1st of June, 1877.—First prize, £5, Earl of Ellesmere; second, £3, R. E. Duckering.

Berkshire boar, above one year and not exceeding two years old on the 1st of June, 1877.—First prize, £5, H. Humphrey, Shrivensham, Berkshire; second, £3, W. Hower, Sevenhampton, Highworth, Wilts. Commended: W. Hower.

Boar, not exceeding one-year-old on the 1st of June, 1877.—First prize, £5, H. Humphrey; second, £3, A. Stewart, Gloucester. Commended: R. Swanwick.

Breeding sow in farrow, or exhibited with her litter.—First prize, £5, Sir W. Throckmorton, Bart., Faringdon, Berks; second, £3, A. Stewart. Highly commended: W. H. Dyer, Hill House, Staple Hill, Bristol. Commended: Sir W. Throckmorton, Bart.

Pen of two breeding sows, not exceeding nine months old on the 1st of June, 1877.—First prize, £5, R. Swanwick; second, £3, W. Hower. Highly commended: A. Stewart. Commended: W. Hower.

CHEESE.

For cheese made in any part of the United Kingdom.—Lot

of four cheese, any colour, above 70lb. each, made in 1876.—First prize, £20, and champion cup, J. Bennett, Wastrow, Somerset; second, £10, G. Gibbons, Tunley Farm, Camerton, Somerset.

Lot of four cheese, any colour, under 70lb. each, made in 1876.—First prize, £15, C. Harding, Frome; second, £10, B. Keen, Ston Easton.

Lot of four cheese, any colour, above 56lb. each, made in 1877.—First prize, £12, C. Maby, Westbury; second, £8, C. Cree.

Lot of four cheese, any colour, under 56lb. each, made in 1877.—First prize, £10, C. Cree; second, £5, W. Macmaster, Wigtownshire.

For cheese of either home or foreign make.—Lot of four cheese, any colour, above 56lb. each, made in 1876 or 1877.—First prize, £35, W. and T. Allen, Devizes; second, £15, T. Candy, Frome.

BUTTER.

Fresh milk butter, not less than 6lb., either in prints or rolls, half-pounds, or pounds, open to the United Kingdom.—First prize, £8, Lord Chesham; second, £5, C. F. Holland, Sussex; third, £3, F. Crang, Timsbury, Bath; fourth, £2, J. Thatcher, Portbury.

Cured butter, salted thirty days before the exhibition.—First prize, £4, Mrs. C. Hallett; second, £3, H. Keeling, Bath.

HORSE SHOEING.

The shoeing competition for the special prizes for smiths work took place on Tuesday, with the following results:—First prize, £3 3s., E. Watts, Shirehampton; second, £2 2s., J. Williams, Frampton Cottrell; third, £1 1s., A. Pearce, Marksbury. Highly commended: F. Dunkerton, Devizes. Commended: J. W. Warry, Shirehampton; R. Sambury, Hambrook; and J. Andrews, North Curry.

CHAMPION PRIZES.

In commemoration of the Society's Centenary meeting the following Champion Prizes were given in pieces of Plate, specially designed for the occasion, and suitably inscribed:—A.—Best bull in the cattle classes.—Prize, £20, Vincent Falmouth, Tregothuan, Probus, Cornwall, a Devon bull (The Only Jones).

B.—Best cow or heifer.—Prize, £20, Earl of Ellesmere, Worsley Hall, near Manchester, a roan Shorthorn yearling heifer (The Lady).

C.—Best ram or pen of sheep.—Prize, £20, A. F. Milton Druce, Twelve Acre, Eynsham, Oxon, an Oxfordshire Down ram (Campsfield).

D.—Best animal in the horse classes for agricultural purposes.—Prize, £20, Earl of Ellesmere, a heavy cart stallion (Young Sampson).

E.—Best animal in the hunter, hack, or pony classes.—Prize, £20, W. H. Freeman, M.D., Newbridge Hill Stud Farm, a thoroughbred mare in foal (Flirt).

Best boar or pen of pigs.—Prize, £20, R. E. Duckering, Northorpe, Kirtton Lindsey, a white improved Lincolnshire breeding sow (Highland Lassie).

THE ANNUAL MEETING.

At twelve o'clock on Tuesday the annual meeting of the Society was held in the Council tent, within the grounds, the most Hon. the Marquis of Lansdown presiding.

The CHAIRMAN opened the proceedings by expressing his pleasure at finding the Society in such a good position financially, and having alluded to the good which it had done in the West of England, particularly during the years since the meeting had been moved from place to place, and the extraordinary progress which it had made, hoped that it would continue to advance as much in the future as it done in the past.

Mr. GOODWIN, the Secretary, then read the report as follows:—"In returning to the birthplace of the Bath and West of England Society, on the completion of a century of active life, the Council can hardly fail to recall to the attention of its members the memory of its predecessors." Having referred to the history of the Society,

the report proceeded:—"The Council acknowledge the greatness of the operations of the Royal Agricultural Society, especially in their power of constructing elaborate scientific investigations, but the Council feel that in the South of England it is incumbent on them to carry on the work which has been put into their hands, to consolidate the federal union of counties which has lasted for a hundred years, and which has been inevitably extended. They rely on the support not only of the rural but of the urban populations, which if not so dense as those of the North are at least not wanting in the energy of their municipal life nor unwilling to welcome the visits of the Society. It is therefore with no common feelings of gratitude and satisfaction that the Society holds its centenary meeting in the ancient and beautiful city of Bath. While admitting the efforts of the Mayor and Corporation of Bath and the local committee, the Council has omitted nothing in its power to make the exhibition worthy of the city with which its name is so honourably connected. There are at present enrolled on the books of the society—Life Governors and members, 109; Governors, 126; annual members, 798; total, 1,033. Of these 258 are in the county of Somerset, Devon 201, Hants 44, Wilts 63, Cornwall 48, Dorset 69, other counties, 350. The funded capital vested in three per cent. Consols still remains at £10,000, no diminution having taken place in the amount since the Croydon meeting." The report went on to state that the show of live stock was the largest ever held in the Society's annals, and said that the collection of implements was the largest and most important yet made by the Society that the art and horticultural departments were satisfactory; recommended the election of a number of gentlemen for the Council for the next term, and concluded by thanking the Mayor and local committees for their zeal in promoting the success of their meeting, also the railway companies for the facilities for travelling afforded. The report was unanimously adopted.

The Earl of Jersey was elected President for the ensuing year, and Mr Jerome Mureh (Mayor of Bath), the Hon. W. Portman, and Mr. G. H. Mowell, of Oxford, were chosen Vice-presidents.

It was announced that the Society had decided to hold the next meeting at Oxford.

COMPLETE LIST OF EXHIBITORS OF IMPLEMENTS, WITH THEIR CHIEF ENTRIES.

Stands 1 to 7.—Fowler and Co., Leeds.—Steam cultivating engines, locomotives, traction engines, turning cultivators, and harrows.

8, 9.—Aveling and Porter, Rochester, Kent.—Steam ploughing engines.

10.—W. Box, Uffington, Faringdon, Berks.—Road locomotive or traction engines.

11, 12.—Wallis and Stevens, Basingstoke.—Engines, thrashing and finishing machines, elevators.

13.—A. Collins, Stalbridge, Blandford, Dorset.—Milking pails and cans, cheese-room stoves.

14.—R. Maynard, Whittleford, Cambs.—Chaff engines, steam engines.

15.—Newton, Chambers, and Co., Sheffield.—Cooking ranges 16 to 20.—Clayton and Shuttleworth, Lincoln.—Steam engines, thrashing, chaff-bagging, and finishing machines, stacking machines, circular saw benches, elevators, screw jacks.

20 to 24.—E. Humphries, Pershore, Worcester.—Steam engines, thrashing machine, seed sheller, corn grinding mill, cider mills, elevators, chaff-cutting, riddling and sacking machines.

25.—Hornsey and Sons, Grantham.—Steam engines, thrashing machines.

26 to 28.—Tasker and Sons, Andover, Hants.—Traction engines, thrashing and chaff cleaning and bagging machines, steam engines, stack machines.

29.—Cottrell and Co., Hungerford, Berks.—Elevators, carts.

30.—Reading Iron Works, Limited, Reading.—Portable engines, thrashing machines.

31 to 33.—E. S. Hindley, Bourton, Dorset.—Steam engines and boilers, force pumps, chaff cutters.

34 to 36.—P. and H. P. Gibbons, Wantage, Berkshire.—Steam engines, thrashing machines.

37, 38.—Ransomes, Sims, and Head, Ipswich.—Locomotive engines, thrashing machines.

39.—Reeves and Son, Westbury, Wilts.—Elevators, pony gear.

40 to 41.—Hayward, Tyler and Co., 8½ Whitecross-street London.—Steam pumping engines, hot air engines, fire engines pumps.

42 to 43.—E. R. and F. Turner, Ipswich.—Steam engines, thrashing machines, grinding mills.

40 to 46.—Raston Proctor and Co., Lincoln.—Steam engines, thrashing and finishing machines.

47 to 49.—Robey and Co., Lincoln.—Portable engines, thrashing and finishing machines, elevators, traction engines, circular saw benches.

50 to 51.—Barford and Perkins, Peterborough.—Steam engines, grinding mills, elevators, steaming apparatus.

52 to 53.—Barrows and Stewart, Banbury, Oxon.—Steam engines, thrashing and finishing machines, elevators, circular saw tables, cultivators, pony gear.

54.—Garret and Sons, Saxmundham.—Steam engines, finishing thrashing machines.

55.—James B. Bartlett, Wimborne, Dorsetshire.—Stacking machines, pony gear, harrows, whippetrees.

56.—Cambridge, Parham and Webb, Bristol.—Steam engines and boilers.

57 to 59.—Brown and May, Devizes.—Steam engines, mortar mills.

60 to 62.—Nalder and Nalder (Limited), Wantage, Berks.—Thrashing machines.

63 to 65.—Powis and Co., 60, Gracechurch-street and Millwall Pier, London.—Steam engines, sawing machines, trying-up machines.

66.—Seekings and Ellery, Gloucester.—Steam engines.

67.—F. W. Turner, St. Albans, Herts.—Steam engines and boilers, band and circular saws.

68.—Alfred Robbins, Bath.—Engines and boilers, chaff cutters, oat and bean mills.

69 to 70.—Burrell and Sons, Thetford, Norfolk.—Ploughing engines, traction engines, thrashing machines.

71.—Nicholson and Son, Newark-upon-Trent.—Steam engine and boilers.

72.—Bradford and Co., Manchester, and High Holborn, London.—Washing and wringing machines.

73, 74.—Wurr and Lewis, 18, Walbrook, London.—Sawing machines, mortising and boring machines.

75.—Savile Street Foundry and Engineering Co., Limited, Sheffield.—Stone breakers, portable engines.

76.—Tuxford and Sons, Boston, Lincolnshire.—Steam engines.

77.—Hempstead and Company (Limited), Grantham, Lincoln.—Engine and boilers.

78 to 80.—Reynolds and Co., 73, Southwark Street, London.—Contractors' engines, circular and band saw machines, mortising machines, tire benders, drilling machines.

81 to 85.—Marshall, Sons and Co., Limited, Gainsborough, Lincoln.—Portable engines, thrashing machines, elevators, traction engines.

86.—Riches and Watts, Norwich.—Engines, grist mill, rakes.

87.—J. Pickering, Stockton-on-Tees.—Pulley blocks hoists.

88.—Dunston Engine Works Company, Gateshead-on-Tyne Durham.—Stone breakers, bone and corn crushers.

89.—Rownson, Drew and Co., 225, Upper Thames Street, London.—Portable forges, power fans.

90.—H. R. Marsden, Leeds.—Stonebreakers, engines.

91.—H. Lauder, Mere, Wiltshire.—Wagon loaders, hay collectors.

92.—Perkins, Paternoster and Burlingham, Hitchin.—Stacking machines, sack lifters, drag harrows.

93, 94.—The "Domestic" Washing Machine Co., Accrington, Lancashire.—Washing, wringing, and mangling machines.

95.—Shanks and Son, 27, Leadenhall-street, London.—Engines and boilers.

96.—S. Griffin, Bath.—Steam engines, boilers.

- 97.—W Ikins and Son, Calne, Wilts.—Steam cheese makers, steam engines, churns.
- 98, 99.—Crowley and Co., Sheffield.—Chaff cutters, portable engines, lawn mowers.
- 100.—Walworth and Co., Bradford, Yorkshire.—Middlings purifiers, rice and seed aspirators and separators.
- 101.—Watson and Haig, Andover, Hants.—Elevators, horse gear.
- 102, 103.—Priestman Brothers, Hull.—Steam cranes.
- 104.—The Sun Auto Pneumatic Lighting and Heating Co. (Limited), 115, Southwark-street, London.—Gas making machines.
- 105.—Walter A. Wood, 36, Worship-street, London.—Reapers, mowers, harvesters and binders, grindstones.
- 106.—H. Simpson, Melkham, Wilts.—Dairy utensils.
- 107.—Carson and Toone, Warminster, Wilts.—Chaff cutting engines, turnip cutters, horse hoes, cheese presses, ploughs, lamb creepers.
- 108.—Page and Co., Bedford.—Drain pipes, tiles, and brick making machines, horse rakes, harrows, ploughs, chaff cutters, mills.
- 109.—St. Pancras Iron Works Company, St. Pancras-road, London.—Stable fittings.
- 110.—A. S. Whiting, Manufacturing Co., Liverpool.—Hoes, rakes, digging forks, scythes.
- 111.—Watts and Co., Bristol.—Horizontal engines, turbine water-wheels.
- 112.—R. Boby, Bury St. Edmund's.—Haymaking machines, horse rakes, corn dressing machines, screens.
- 113.—Moule's Patent Earth Closet Co., Limited, Garrick Street, Covent Garden, London.—Earth closets.
- 114.—W. Liddiard, Wantage, Berks.—Earth closets.
- 115.—Parnall and Sons, Bristol and Exeter.—Portmanteaus and bags, whips, stable brushes, harness.
- 116.—J. and F. Howard, Bedford.—Engines, steam cultivating apparatus, ploughs, harrows, horse rakes, haymakers, mowers, reapers.
- 117.—Perkins and Bellamy, Ross, Hereford.—Corn drills, cattle cribs, sheep dipping apparatus, cattle troughs.
- 118.—Harrison, McGregor and Co., Leigh, Manchester.—Mowers and reapers, chaff cutters, pulpers and slicers.
- 119.—Wm. Baker, Bristol.—Mowing and reaping machine, haymaking machines, horse rakes, chaff cutters, sheep troughs.
- 120.—S. Acton & Co., Biddestone, and Chippenham, Wilts.—Ploughs, horse hoes, mowing and reaping machines, horse rakes.
- 121.—Pickaley, Sims, and Co., Limited, Leigh, Lancashire.—Chaff cutters, root pulpers and slicers, mowers and reapers, harrows, horse rakes.
- 122.—T. T. Baker, Compton, Newbury Berks.—Corn dressing machines, liquid manure carts.
- 123.—Denning and Co., Chard, Somerset.—Corn drills, haymaking machines, horse gears, apple mills, chaffcutters, corn mills.
- 124.—Bristol Wagon Works Company, Limited, Bristol.—Carts, wagons, horse rakes, corn dressing or winnowing machines, lawn mowers, churns, chaffcutters, ploughs, mowers and reapers, engines and boilers.
- 125.—Hornby and Sons, Grantham.—Mowers and reapers, ploughs, turnip cutters, root pulpers.
- 125A.—J. Howorth, Farnworth and Manchester.—Revolving Archimedean screw ventilators.
- 126.—Tasker and Sons, Andover, Hants.—Water carts, winnowing machines, elevators, corn drills, horse rakes.
- 127.—A. Dodman, King's Lynn.—Engines and boilers.
- 128.—Bears and Sons, Newton Abbott, Devon.—Hay machines.
- 129.—J. Eddy, Kemford, Exeter.—Ploughs, harrows, seed drills.
- 130.—Cottrell and Co., Hangerford, Berks.—Carts, pumps.
- 131.—Reading Ironworks Company, Limited, Reading.—Engines, circular saw benches, horse rakes, thrashing machines.
- 132.—Stoibert and Pitt, Bath.—Concrete mixers, steam cranes.
- 133.—Cambridge, Farham, and Webb, Bristol.—Horse gear, rollers and clod crushers, harrows.
- 134.—Barford and Perkins, Peterborough.—Steam ploughs and diggers, corn grinding mills, steaming apparatus, field rollers.
- 135.—Garrett and Sons, Saxmundham.—Corn and seed drill, manure distributors.
- 136.—Delano and Co., Cheapside, London.—Turnip cutters, steam, cooking apparatus.
- 137.—F. W. Turner, St. Alban's, Herts.—Pumps, horse gear.
- 138.—A. Robbins, Bath.—Mowers and reapers, churns, weighing machines, chaff cutters, forks.
- 139.—Reeves and Son, Westbury, Wilts.—Manure and seed drills, water carts, pumps, harrows, ploughs, horse hoes, haymaking machines.
- 140.—Nicholson and Son, Newark-on-Trent.—Haymakers, horse rakes, oil cake breakers, horse gear.
- 141.—Ransomes, Sims, and Head, Ipswich.—Ploughs, haymakers, horse rakes, lawn mowers, steam engines.
- 142.—Hunt and Tawell, Earls Colne, Halstead, Essex.—Winnowers, chaff-cutters, oil-cake breakers, root pulpers, grindstones.
- 143.—J. H. Knight, Farnham, Surrey.—Steam digging machine.
- 144.—Bamford and Sons, Uttoxeter, Staffordshire.—Chaff cutters, oil cake mills, pumps, cheese-making apparatus.
- 145.—Bradford and Co., Manchester, and Holborn, London.—Washing, wringing and mangling machines, churns, potato washers.
- 146.—Corbett and Peele, Shrewsbury.—Winnowing and corn dressing machines, chaff-cutters, cheese presses, ploughs, harrows, turnip drills.
- 147.—Lowcock and Barr, Shrewsbury.—Mowers and reapers, ploughs, chaff-cutters, turnip cutters, garden rollers.
- 148.—Bargess and Key, Holborn Viaduct, London.—Mowers, reapers.
- 148A.—C. Loader, East Pennard, Shepton Mallet.—Elevators.
- 149.—Larkworthy and Co., Worcester.—Drag, harrows, ploughs, troughs.
- 150.—J. Baker, Wisbech.—Corn dressing machines.
- 151.—Albion Iron Works Company, Rageley, Stafford—Grist mills, chaff cutters, cheese presses, horse gear, horse rakes, garden rollers.
- 152.—Samuelson and Co., Banbury.—Reaping and mowing machines, turnip cutters, corn lifters.
- 153.—W. Smith, Kettering.—Horse hoes, turnip thinners, grindstones.
- 154.—H. Yorath, Cardiff.—Elevators.
- 155, 156.—Hulmes and Sons, Norwich.—Seed shellers, circular saw tables, drills, corn dressing machines.
- 157.—Maldon Iron Works Company, Limited, Maldon.—Horse gear, chaff cutters, oilcake mills, kibbler, troughs.
- 158.—Osborne and Co., St. Anne-street, Liverpool.—Mowers and reapers, grindstones.
- 159.—Musgrave and Co., Belfast.—Stable fittings.
- 160.—Milford and Son, Thorverton, Collompton, Devon.—Wagons, carts.
- 161.—Llewellyn and Son, Haverford West.—Churns.
- 162.—Crampton Brothers, Sheffield, York.—Engineers' hand tools.
- 163.—Alway and Sons, 37, Chapel-street, Pentonville, London.—Churns and dairy fittings.
- 164.—Kell, Meata, and Co., Gloucester and Ross.—Corn drills, manure distributors, ploughs.
- 165.—Coleman and Morton, Chelmsford.—Cultivators, liquid manure carts, oilcake cutters, whippetrees.
- 166.—W. N. Venman, Bristol.—Carts and wagons.
- 167.—Josiah Le Butt, Bury St. Edmunds, Suffolk.—Hay-making machines, corn screens, seed drills.
- 168.—Keyworth and Co., 35, Tarleton-street, Liverpool.—Mowers, harrows, pumps, wringing and mangling machines.
- 169.—S. T. Osmond, Newtown Foundry, Ramsgate, Wilts.—Water carts.
- 170.—R. Kendall, Bath.—Garden implements and furniture, washing, wringing, and mangling machines.
- 171.—S. and A. Fuller, Bath.—Carriages, harness.
- 172.—Howard and Co., Tewkesbury.—Sheep racks, troughs, hurdles, garden seats.
- 173.—George Hathaway, Chippenham, Wilts.—Revolving barrel churns.
- 174.—Flower and Hartley, Chester.—Forges, hot air tea iron.
- 175.—Field and Co., 17, George Piazza, Liverpool.—Rake forks, pumps, churns.
- 176.—Vipan and Headly, Leicester.—Horse hoes, ploughs, pulping machines, croquet seats.

- 177.—Rogers and Co., (Limited), Bristol.—Carriages.
 178.—F. H. Miller, Bath.—Bath chairs, bicycles.
 179.—Allen and Wall, Bristol and Bath.—Portmanteaus.
 180.—Henry Wippel, Bristol.—Sacks, waterproof covers.
 181.—W. Bone, Framlingham.—Seed and grain cleaners.
 182.—The Anti-Lithon Composition Co., Limited, Bristol.—Boiler composition.
 183.—Hall and Green, Wantage, Berks.—Fly-catchers and destroyers.
 184.—Newton, Wilson and Co., 144, High Holborn, London.—Sheep shearing machines, horse and cattle groomers, washing, wringing, and mangling machines.
 185.—E. and H. Vezzy, Bath.—Carriages.
 186.—J. Swaffield, Bath.—Carriages.
 187.—H. Craggs, 24, Lorne-terrace, London.—Scythe sharpeners, carriage rugs, mats.
 188.—E. Kerr, jun., 66, Manor-street, Dublin.—Water throwing apparatus.
 189.—May and Co., 5, Clifton-gardens, London.—Horse hoes and root thinners.
 190.—Robinson and Richardson, Kendal.—Churns.
 191.—F. B. Smith, Bath.—Perambulators.
 192.—Bush and Co., 200, Camberwell-road, London.—Dog carts.
 193.—Gold Brothers, Windsor.—Carts and gigs.
 194.—Marvton and Co., Birmingham.—Carriages.
 195.—Rawling and Son, Frome, Somerset.—Leather belt-ings.
 196.—Roberts and Sons, Bridgwater, Somerset.—Carriages.
 197.—T. J. and J. Perry, Stokes Croft, Bristol.—Carriages.
 198.—H. Gold, Windsor.—Carriages.
 199.—C. Hall, Bath.—Gas cooking stoves.
 200.—Magg and Son, Melksham.—Rick cloths, wagon covers, thatching cords.
 201.—A. Lyon, 33, Windmill-street, Finsbury-square, London.—Mining machines, machines to assist digestion, slicers.
 202.—Lewis and Son, Sawclose, Bath.—Gas stoves.
 203.—T. Lloyd, Winchester.—Ventilators.
 204.—A. Wriach, Ipswich.—Garden furniture.
 205.—Barton and Sons, Bristol.—Carriages.
 206.—J. B. Pinnock, Bristol.—Carriages.
 207.—Haynes and Jeffers, Coventry.—Bicycles, perambulators.
 208.—B. Goldstone, Trowbridge, Wilts.—Carts.
 209.—W. Eades, Bath.—Marble monuments.
 210.—W. F. Ford, Bath.—Carriages.
 211.—Orne and Co., St. Andrew's-street, Holborn Viaduct, London.—Manure pumps, bench drilling machines, darning machines.
 212.—Olley and Co., 9, York-street, Southwark.—Steam band sawing machines.
 213.—J. Howard, Chesham, Bucks.—Articles for dairy and domestic use.
 214.—Herts and Co., 43a, Store-street, London.—Bog oak carvings.
 215.—Davis and Son, Bath.—Gas cooking stoves, heating apparatus.
 216.—Laurence and Co., 23, St. Mary Axe, London.—Refrigerators.
 217.—W. Titley and Sons, Bath.—Dairy salts, Irish vells, and cheeses.
 218.—Joseph King, Bath.—Monumental designs and marble chimney pieces.
 219.—E. Headly and Son, Cambridge.—Garden implements and furniture.
 220.—B. Newham and Son, Bath.—Carriages.
 221-223.—W. Parham, Bath.—Wire fences, garden chairs, lawn mowers.
 223.—C. Thorn, Norwich.—Carriages.
 224.—J. Offord, Brook-street and Wells-street London.—Carriages.
 225.—Bradbury and Co. (Limited), Bristol.—Sewing machines.
 226.—T. Board, Bath.—Assortment of leather goods.
 227-228.—J. Bladwell, Bath.—Bench ends, moveable conservatories, forcing pits.
 229.—Craston and Luck, Birmingham.—Conservatories, greenhouses.
 230-231.—Follows and Bate, Manchester.—Garden ploughs, forks, churns, lawn mowers, ventilators, smoke conductors, knife cleaners.
 231a.—P. J. Perry, Banbury.—Conservatories, greenhouses.
 232.—Abbott and Co., Bideford, Devonshire.—Turn-wrest ploughs, turnip slicers.
 233.—H. S. Cramp, Gloucester.—Sheep racks, troughs, cattle cribs, water barrows, continuous fencing, iron corn bins.
 234.—J. S. Stone, Newport, Monmouthshire.—Carts and waggon.
 235.—Phillips and Company, Grantham.—Mowers and reapers.
 236.—W. Brenton, Polbathic, Cornwall.—Reaping and mowing machines, mangling drills, and manure distributors, forks.
 237.—Davey, Sleep and Co., Polsoo and Croftshole, Cornwall.—Ploughs, cultivators, horse rakes, whippetrees.
 238.—W. Gardner, Gloucester.—Mill furniture.
 239.—J. Sinclair, 104, Lendenhall-street, London.—Fire engines, respirators, fire buckets.
 240.—A. C. Bamlett, Thirsk, Yorkshire.—Mowing and reaping machines.
 241.—W. Affick, Swindon, Wiltshire.—Water carts, hay-making machines, pig troughs, force pumps.
 242.—Lyster and Co., Darcey, Gloucester.—Chaff cutting machines, horse gear, clod crushers, rakes, haymakers, cheese presses.
 243.—F. and H. Mattison, Bedall, Yorkshire.—Reapers and mowers.
 244.—Smith and Grace, Thrapstone, Northampton.—Horse hoes, grindstones.
 245.—Dell and Son, 26, Mark-lane, London.—Mill stones, grain sorters, middlings purifier, speed indicators.
 246.—T. Bigg, Great Dover-street, Boro'.—Sheep dipping apparatus.
 247.—Thompson, Bros., Bridgewater.—Cheese presses, dairy utensils, chaff cutters, cake breakers, horse gears.
 248.—William Anson Wood, 5, Upper Thames-street, London.—Mowers and reapers.
 249.—R. Carey, Bath.—Garden ornaments.
 250.—J. Main and Co., 108, Queen Victoria-street, London.—Wire fencing, field gates, garden seats.
 251.—G. Kearsely, Ripon, York.—Grass mowers and reapers.
 252.—Eastwood and Co., Limited, Preston.—Churns.
 253.—Preese and Sons, Leominster, Hereford.—Corn and seed drills.
 254.—Argio, Stidolph, Colchester and Woodbridge.—Machines for dressing barley, cleaning and separating clover and other seeds without motive power.
 255.—Anderson, Abbott, and Anderson, Queen Victoria-street London.—India-rubber endless belts, hoes, waterproof covers.
 256.—J. S. and G. Cannings, Finchdean, Horadean, Hants.—Liquid manure or water carts, horse hoes.
 257.—Penney and Co. Limited, Lincoln.—Potato separators, corn screens, sack trucks, lime screens.
 258.—Pooley and Son, Liverpool.—Weighing machines.
 259.—J. Savery, Eartheott, Bristol.—Ploughs, cultivators, horse hoes, drags and bodkins, mowers and reapers, chaff cutters.
 260.—Woods, Cockedge and Co., Stowmarket.—Mills, root pulpers, turnip cutters, pony gear, steam engines.
 261.—Sawney and Co., Limited, Beverley, Yorkshire.—Corn dressing machines, sack burrows, garden seats.
 262.—Williams and Son, Rhuddlan, Rhyl, Flint.—Chaff-cutters, root pulpers, turnip cutters, horse gear, mowers and reapers steam engines.
 263.—Rollins and Co., Old Swan Wharf, London Bridge.—Horse-rakes, lawn mowers, hay forks, pumps, churns, trellises.
 264.—Charles D. Phillips, Newport, Monmouthshire.—Rick sheets, waterproof wagon covers, oak stands.
 265.—J. and J. T. Kiddle, Ludwell, Salisbury.—Waggons, carts.
 266.—G. Milford, Thorverton, Devon.—Waggons, carts.
 267.—W. F. Johnson, Leicester.—Garden seats, vases and pedestals.
 268.—C. E. Zimdars, 327, Gray's Inn-road, London, W.C.—Pneumatic bells.
 269.—J. Barrow, Bristol.—Furniture polish reviver.
 270.—J. Butler, Newcastle-on-Tyne.—Stencil plates, india-

rubber endorsing stamps.

271.—Black and Co., Worcester.—Metallic spring mattresses.

272.—F. and C. Hancock, Dudley.—Machines for washing butter, cinder sifters.

273.—W. Whittaker, Bristol.—Millstones.

274.—W. Wade, Leeds.—Churns.

275.—The Scientific Toy and General Novelty Company, Cloth Fair, London.—Domestic labour-saving apparatus, scientific toys.

276a.—G. Siakwell, Dunstable.—Sack elevators, horse hoes.

276.—Haynes and Sons, Edgware-road, London.—Hydronettes, pumps, garden seats, pruning shears.

277.—Smith and Son, Bristol.—Perambulators and invalid chairs.

278.—G. D. Thompson, Clapham Junction.—Egg beaters, emery stone sharpeners for machine knives.

279.—M. de Leon and Co, 24, Rathbone-place, London.—Domestic articles.

280.—J. C. Coles, Chippenham.—Furniture cream.

281.—T. J. Constantine, 61, Fleet-street, London.—Cooking ranges.

282.—G. Davies, Albany-street and Regent-street, London.—Cements.

283.—J. Cutress, South Shields.—Knife sharpeners.

284.—B. Smith, Bath.—Fret-work and scroll sawing machines.

285.—F. Van Stan, 19, Bridport-street, London.—Fish and flower stands.

286.—W. Muggleton, South Norwood, Surrey.—Endorsing stamps.

287.—T. G. Potter, 17, Oxford-street, London.—Hydrocarbon lanterns, cooking stoves, refrigerators.

288.—A. Van Praag and Co., 35, Crown-street, Soho, London.—Filters.

289.—Williams and Co., Loughborough Junction, London.—Sawing machine.

290.—Bailey Brothers, 71, Chancery-lane, London.—Stencil plates.

291.—J. Goss, Plymouth.—Stencil plates, branding irons.

292.—Brown and Co., Charlotte-street, Blackfriars, London.—Oil feeders, needle lubricators, tubular boiler brushes.

293.—J. Chapman, Frome and Trowbridge.—Monumental ornaments.

295.—Wright and Co., Airdrie.—Hot-water boiler.

296, 297.—J. Unita, Edgware-road, London.—Ruck cloth, stable articles, marquees, tarpaulin.

298.—Taylor and Wilson, Accrington.—Washing machines.

299.—S. Drukker, 46, Buckingham-road, King'sland London.—Model curiosities.

300, 301.—B. Warner, Devizes.—Coal scuttles, summer house.

302.—White and Co., 65, Trinity-square, Southwark, London.—Oil feeders.

303.—Waite, Burnell, Huggins, and Co., 228, Upper Thames-street.—Lawn mowers.

304.—J. Willway, Bristol.—Sewing machines.

305.—Wolstencroft and Company, 46, Ludgate-hill, London.—Washing machines, preparation for the destruction of rats and mice.

306.—Wright and Butler, Birmingham.—Cooking stoves, lanterns.

307.—C. Taylor, Great Hampton-street, Birmingham.—Pocket books, albums.

308.—Denton and Jutsum, 8, New Broad-street, London.—Engine varnish, agricultural grease, paints.

309.—Goundry and Co., 181, Upper Thames-street, London.—Compressed tea and coffee.

310.—J. Groat, Hereford.—Food warmers.

311.—J. Parker, Woodstock, Oxon.—Earth closets.

311a and 103a.—G. E. Jeffery, Stamford, Lincoln.—Hay-makers, horse rakes, chaff cutters, steam engines, horse works.

312.—Day, Son and Hewitt, 22, Dorset-street, Baker-street, London.—Stockbreeders' medicine chests.

313.—The Agricultural and Horticultural Association, Limited, 47, Millbank-street, Westminster.—Garden seeds, artificial manures, feeding meals.

314.—J. G. Eagles, Bath.—Cattle cake s.

315.—S. Pettifer, Cradwell, Wilts.—Stock breeders' medicine chests.

316.—Beach and Co., Dudley.—Cattle foods.

317.—Spratt's Patent Meat Company, Henry-street, Tooley-street, London.—Dogs' food and medicines.

318.—Ayres, Chambers and Ayre, Wilmington, Hall.—Oileakes.

319.—J. M. Jones, Gloucester.—Specific for foot rot.

320.—Smith and Co., Bristol.—Guanos.

321.—Lilwall Brothers, Lowesmoor, Worcester.—Cattle medicines.

322.—W. G. Clarke, Limehouse, London.—Dog and poultry foods.

323.—Corry and Soper, Shad Thames, London.—Specific.

324.—Neale and Sons, Sherston Magna, and Coraham, Wilts. and London.—Stock breeders' medicine chests.

325.—Tipper and Sons, Birmingham.—Medicated mystery.

326.—E. Moore, Chippenham.—Annatto.

327.—Phoenix Oil Mill Company, Liverpool, Lancashire.—Feeding cakes.

328.—Lewis and Co., 180, Liverpool-road, London.—Medicine chests.

329.—Barr and Co., Liverpool.—Feeding stuffs.

329a.—C. Trapnell, Bristol.—Articles of furniture.

330.—Miller and Co., Tewkesbury.—Cattle foods, artificial manures.

330a.—W. Bowden, Walsall, Stafford.—Harness.

331.—Day and Sons, Crewe, Cheshire.—Medicine chests.

332.—T. Farmer and Co., Mark-lane, London.—Artificial manures.

333.—H. and T. Proctor, Cathay, Bristol.—Artificial manures.

334.—W. and H. M. Goulding, Dublin and Cork.—Artificial manures.

335.—McMaster, Hodgson and Co., Dublin.—Extract of annatto.

336.—Webb and Sons, Wordaley, Stourbridge.—Farm and garden seeds.

337.—Wheeler and Son, Gloucester.—Farm seeds.

338.—Carter and Co., High Holborn, London.—Farm and garden seeds.

339.—Sutton and Sons, Reading.—Farm and garden seeds.

340.—H. Inman, Stretford, Manchester.—Garden houses.

341.—E. Tuck, Bath.—Conservatories, cucumber frames.

342.—Dennis and Co., Chelmsford.—Greenhouses, throttle valves.

343.—Boulton and Paul, Norwich.—Plant preservers tents.

345.—Piggott Brothers, 59, Bishopsgate Without, London.—Tents, waterproof goods.

346.—Merchant and Son, Widome, Bath.—Conservatories.

347.—B. Edgington, 2, Duke-street, London Bridge.—Waterproof coverings.

348.—J. Matthews, Weston-super-Mare.—Garden pottery

SHORTHORN SALES IN THE NORTH.—On the 6th ult. there were two sales of Shorthorn cattle at the Agricultural Hall, Cockermouth, Cumberland, when Messrs. Mitchell, Bowe, and Mitchell offered the entire herd belonging to John Postlethwaite, Esq., of The Hollins, near Whitehaven, which had been removed there for convenience of sale; also selections from the herds of Messrs. Thompson, Todd, Littleton, and Brookbank. Mr. Postlethwaite's herd contained representatives of the herds of the Duke of Devonshire, of Holker, Earl Beattie, Underley and also of the Booth herds of Messrs. Gaitkell, Hull Santon, and Mr. R. Jefferson, Preston House &c. Of pedigree cattle there were 16 females, which sold for a total of £570 13s. 6d., or an average of £35 13s. 4d.; 5 bulls averaged £26 15s. 4½d. —£133 7s. 0d.; the average of the 21 animals was £33 10s. 6d., and the total of the whole £704 0s. 6d. There were 18 animals belonging to the breeders above-mentioned—10 females and 8 males, and they realised a total of £390 18s., or an average of £22 1s.

AGRICULTURAL SOCIETIES.

DERBYSHIRE.

On May 25th the competition for prizes for sheep-shearing and horse shoeing, offered by the Derby Society, took place near Derby. The sheep-shearing prizes for farmers' sons were won as follows:—The first prize of £3 3s. was awarded to Mr. Dockery, of Hilton Common; the second of £2 2s. to Mr. Wilnot, of Crich Chase, Ambergate; and the third to Mr. Roberts, of Stanton-by-Bridge.

HADLEIGH.

The annual spring show of this Association was held on May 25th in Holbecks Park, the seat of Miss Rowley. There was a very good show. The following is the

PRIZE LIST.

HORSES.

FOR AGRICULTURAL PURPOSES.

Stallion.—Prize, J. Raynham.
 Brood mare.—First prize, J. Cooper; second, E. W. Archer; third, S. Coppin.
 Gelding.—Prize, W. Kersey.
 Mare without foal.—First prize, J. F. T. Dipnall; second, R. Makens.
 Three-year-old filly.—Prize, F. Grimwade.
 Colt, under twenty-seven months old.—First prize, A. Everett; second, W. Byford.
 Gelding, under twenty-seven months old.—First prize, J. Everett; second, D. Dyer.
 Filly, under twenty-seven months old.—First prize, Sir C. Rowley; second, B. Turner.
 Colt or gelding, under fifteen months old.—First prize, B. Searn; second, W. M. Nunn.
 Filly, under fifteen months old.—First prize, W. Byford; second, W. Wilson.
 Foal.—First prize, J. Scott; second, S. Coppin.
 Pair of cart horses.—First prize, H. D. Postans; second, F. Grimwade.
 Best mare or filly in any of the above classes.—Prize, silver cup or value £5 5s., Sir C. R. Rowley, Bart.
 RIDING AND NAG HORSES.
 Heavy-weight carrying hunter, not less than 15 hands high.—Prize, silver cup, value £5 5s., C. Bailey.
 Light-weight carrying hunter, not less than 14 hands high.—First prize, silver cup, value £5 5s., C. J. Grimwade; second, J. F. Robinson.
 Mare or gelding, exceeding 15 hands high, exhibited in harness.—First prize, J. F. Robinson; second, W. Grimwade.
 Riding cob, not exceeding 15 hands high.—First prize, L. Juby; second, L. Juby.
 Cob, not exceeding 15 hands high, exhibited in harness.—First prize, T. Chisnall; second, H. Newman.
 Best jumper in the above classes.—First prize, silver cup, value £3 3s., J. F. Robinson; second, W. Bear, Acton.
 Pony, not exceeding 13 hands high.—First prize, T. Howard; second, W. F. Mortimer.
 Pony, not exceeding 13 hands high, exhibited in harness.—First prize, J. G. B. Owe; second, R. Woodgate.
 Pony, not exceeding 12 hands high.—First prize, R. Wright; second, W. Kersey.
 Best jumper in the pony classes.—Prize, W. Kersey.

CATTLE.

Bull of any breed.—First prize, J. F. Robinson; second, R. Partridge.
 Polled cow.—First prize, D. Dyer; second, L. Juby.
 Best horned cow.—First prize, J. Everett; second, Miss Rowley. Commended: L. Juby.
 Fat beast of any age.—Prize, J. Rand.
 Fat steer or heifer, under thirty months old.—First prize, W. Kersey; second and third, J. Scott.

PIGS.

Best boar.—First prize, J. F. Robinson; second, F. Grimwade.
 Best breeding sow.—First and second prizes, J. Hicks.
 Best sow with pigs.—First prize, J. Norfolk; second, F. Grimwade.
 Prizes were also given for sheep-shearing, ploughing, &c.

HIGHLAND.

The monthly meeting of the directors of this Society was held in their chambers, No. 3 George IV. Bridge, Mr. Dove, Eastfield, in the chair. Mr. F. N. Menzies reported apologies for the absence of Mr. Copland Mill, of Ardlethen; and Mr. Murray of Dollie.

The business to be brought before the general meeting on the 13th current was arranged as follows:—Election of members; arrangements for Edinburgh and Dumfries Shows; agricultural education; chemical department; veterinary department; memorial to the late Marquis of Tweeddale; transactions for 1877.

The list of Candidates for election at the general meeting was submitted; and the Secretary stated that he could, in terms of the bye-laws, receive additional names up to the morning of the 13th.

The Secretary intimated that he had received from Mr. Kennedy, county collector, £614, the amount of the voluntary assessment in Mid-Lothian towards the expenses of the Show.

The Secretary reported that at a meeting of the General Committee of Superintendence which had just terminated, the usual sub-committees and two attending members on each set of judges had been appointed.

A letter was submitted from Mr. H. Gordon, Clerk of Supply Dumfries, sending except from minute of annual general meeting of the Commissioners of Supply of the county, from which it appeared that Colonel Walker moved that £1,000 be guaranteed from the county towards the expenses of the Show, and that it be assessed upon Commissioners of Supply only; and that this was seconded by Mr. Arundell, and agreed to.

ROYAL OF ENGLAND.

MONTHLY Council, Wednesday, June 6th, 1877. Present—Lord Skelmersdale, President, in the chair; the Duke of Bedford, Earl Cathcart, the Earl of Feversham, the Earl of Leicester, the Earl of Powis, Lieut.-General Viscount Bridport, Lord Chesham, Lord Elington, M.P., Lord Vernon, the Hon. W. Egerton, M.P., Sir Massey Lopes, Bart., M.P., Sir A. K. Macdonald, Bart., Sir B. C. Musgrave, Bart., Sir W. E. Welby-Gregory, Bart., M.P., Sir Watkin W. Wynne, Bart., M.P., Mr. Aveling, Mr. Aylmer, Mr. Booth, Mr. Bowly, Mr. Cantrell, Mr. Edmonds, Mr. Frankish, Mr. Branslreth Gibbs, Mr. Hemsley, Mr. Horley, Mr. Hornsby, Mr. Howard, Mr. Bowen Jones, Colonel Kingscote, C.B., M.P., Mr. Leeds, Mr. Masfen, Mr. Milward, Mr. Pain, Mr. Randell, Mr. Ransome, Mr. Ridley, M.P., Mr. Russell, Mr. Sanday, Mr. Shuttleworth, Mr. Stratton, Mr. Torr, M.P., Mr. Jabez Turner, Mr. Wakefield, Mr. Whitehead, Mr. Wilson, Professor Simond and Dr. Voelcker.

The Earl of Lonsdale, of Lowther, Westmoreland, was elected a Governor of the Society, and the following new members were elected:

Angus, John Beall, Stocksfield, Northumberland.
 Angus, Jonathan, Broomley, Stocksfield, Northumberland.
 Baird, Alexander, Urie, Stonehaven, N.B.
 Banks, Edwin, H., Highmoor House, Wigton.
 Bell, George John, Nook, Irthington, Brompton, Carlisle.
 Boughey, George, Lyrall Elhamere, Shrewsbury.
 Bruce, Alexander K., Catherine-street, Strand, W.C.

Purrow, Thomas, Epperstone, Nottingham.
 Ray, Benjamin, Horwonden, Staplehurst.
 Rice, John, New Marton, near Chirk, Ruabon.
 Rasmore, Frederick, Park House, Battle, Sussex.
 Radock, George, 2, Wilton Parade, Blackpool.
 Darlington, James, Black Park, Chirk, Ruabon.
 Radney, Thomas, Hangleton, Shoreham.
 Durham, Charles, Aldenham Abbey, Watford.
 Dyer, Bernard, F.C.S. 17, Great Tower Street, E.C.
 Evans, John Samuel Hugh, Voryd Lodge, Rhyl.
 Gile, John Christopher, Aigburth Lodge, Liverpool.
 Gwyn, John James, Troy Farm, Somerton, Deddington, Oxford.

Graves, John, Thurlstone, Penistone, Yorks.
 Green, Dawson, Whittington Hall, Carnforth.
 Gyles, William, Frodsham, Preston Brook, Cheshire.
 James, Richard, Dyffryn Aur, Llanrwst.
 Jones, Robert, Gauthane Park, Llandovery, S. Wales.
 Jones, William, Pikes End, Ellesmere, Shrewsbury.
 Kiley, Edwin, Wilkham Court, Sandwich.
 Mackie, John, The Reading Iron Works, Reading.
 McQueen, James, Crofts, Dalbeattie, N.B.
 Marsh, John, Bradley Hall, Grappenhall, Warrington.
 Mee, E. D., Broomhills, Billericay, Brentwood.
 Montgomery, Andrew, Boreland, Castle Douglas, N.B.
 Morris, John Grant, Allerton Priory, Woolton, Liverpool.
 Mort, Charles, Burlington, Sarsbury.
 Mort, Frederick Drawry, Eastlands, Stafford.
 Nelson, Robert, Hildwood, Liverpool.
 Nicholson, Richard Alfred, Barkhouse, Cockermouth.
 Nutt, Thomas, Letton Court, Brompton Brian, Herefordshire.
 Penwell, W. Stackhouse C., Trethane, Probus, Cornwall.
 Read, James, Homington, Salisbury.
 Richards, George F., Green Hall, Llan'yllin, Mont.
 Self, Charles, Poplar Farm, Bussingbourne, Royston, Cambs.
 Snowe, James, Scrisbriek, Ormskirk.
 Slater, Thomas, Boston.
 Smith, Charles, care of Mr. William Chatterton, Hallington, Louth.
 Tanner, Alfred, Shrawardine, Shrewsbury.
 Tappen, George, Chantrey Watson, Chantrey House, Horley, Crawley.
 Thompson, Robert, Mythop Lodge, Weeton, Blackpool.
 Wakeley, W. Rainham, Sittingbourne.
 Walton, J. A., Lockington, Derby.
 Warburton, J. S., Charnley-street, Preston.
 Webster, Robert, Peckirk, Market Deeping.
 Whyte, James, Aldborough Hall, Darlington.
 Wisden, Thomas Falconer, Broadwater, Worthing.
 Woodbridge, George, Manor Farm, Levant, Chichester.
 Woods, Arthur, The Wilderness, Walton-on-the-Hill, Liverpool.
 Woods, Henry William, Clipstone Park, Mansfield, Notts.

FINANCES.—Colonel KINGSCOTE, C.B., M.P. (Chairman) presented the report, from which it appeared that the Secretary's receipts during the past month had been duly examined by the Committee, and by Messrs. Quilter, Hall, and Co., the Society's accountants, and found correct. The balance at the bankers on May 31 was £5,687 16s. 8d, while £2,000 remains at deposit. This report was adopted.

JOURNAL.—Mr. M. W. RIDLEY, M.P., reported that the spring number of the *Journal* had been sent to each member of the Society whose subscription is not in arrear; and the Committee recommended the usual payments for printing, illustrations, and literary contributions. This report was adopted.

CHEMICAL.—Mr. WAKEFIELD reported that Dr. Voelcker's quarterly report had been read, and ordered to be printed for consideration at the next meeting of the Committee. This report was adopted.

GENERAL LIVERPOOL.—Lord CHESHAM (Chairman) reported the following recommendations of the Committee:—First, that the programme of the Liverpool meeting, as arranged by the Committee, be adopted; second, that the Secretary be authorised to advertise upon the Liverpool omnibuses and tram-cars; third, that an omnibus be allowed to ply in the showyard, from the

implement yard to the horse ring, at a fare of 2d. each person. This report was adopted.

CATTLE PLAGUE.—Lieutenant-General Viscount Bridport reported that Professor Brown had sent the accompanying report to the Committee, detailing the circumstances attending the cattle plague which have occurred since their last meeting. The Committee, in presenting this statement to the Council, ventured to express their satisfaction with the procedure of the Privy Council, and their belief that the present state of things justifies a hope that the country may shortly be declared free of cattle plague.

REPORT OF PROFESSOR BROWN.—Two outbreaks of cattle plague have been reported since the last meeting of the Veterinary Committee on May 1; one in Lincoln-street, Hull, and the other in Whitechapel. In both cases the evidence was of a character to justify a doubt as to the true nature of the disease.

The outbreak at Hull was reported to the Veterinary Department on May 5, and Mr. Duguid proceeded to investigate the case without delay. According to his report the symptoms exhibited by the diseased animal were not sufficiently marked to enable him to form an opinion, but after a post-mortem examination he was satisfied that the disease was cattle plague; the four cows which were in the shed with the diseased animals were immediately destroyed, and the premises declared infected. An inquiry was instituted at once, but nothing was discovered which in any way connected the outbreak with centres of infection which had previously existed in the borough. No case of cattle plague had been reported in Hull for a period of six weeks, and a careful inspection of all the cow-sheds did not result in the discovery of any circumstances which would lead to a suspicion that a fatal disease had existed during that interval. If cattle plague had prevailed, some of the sheds would certainly have been found empty. The cow which was reported ill on May 5th was bought of a dealer on April 22nd, and two other cows which were brought into Hull with her remained healthy. The four cows which were in the shed with the diseased cows from Wednesday, May 2nd, when the first signs of illness were observed, to Sunday, May 6th, showed no indication of being infected with cattle plague, and no further outbreak of the disease has occurred in Hull.

The outbreak in Baker's-row, White's-row, Whitechapel, has excited a good deal of attention, in consequence of the statement which was made at a meeting of the Board of Works, by the Chairman of the Cattle Plague Committee, to the effect that the Board's inspector had reported the existence of cattle plague, while the officers of the Privy Council considered the disease to be pleuro-pneumonia. The attention of the Board of Works has been called to the fact that the telegram which was sent by their inspector to the Veterinary Department contained no reference to cattle plague, but merely stated that some animals required to be inspected, and that the carcass of one of them, which had been slaughtered the previous day, was at Mr. Cave's, butcher, Dempsey-street, Whitechapel. The chief inspector at once proceeded to the butcher's premises, and was shown the carcass, which was dressed in the ordinary way, and at the same time some lungs were produced, in one of which (the left one) the disease, pleuro-pneumonia, had advanced to such an extent that nearly the whole of the structure was implicated.

On visiting the sheds whence the animals had been removed the chief inspector found three cows presenting symptoms which led him to suspect cattle plague, and he therefore placed the premises in charge of the police, and took possession of the carcass at the butchers; the hide and offal had been removed, and it did not appear that anything had been disinfected.

The three cows in the shed in White's-row, and two others, which the owner had kept out of the way in another part of the premises, were subsequently seen by Professor Simonds, and although the evidence was not quite satisfactory, it was deemed advisable to declare the existence of cattle plague, and the animals were accordingly destroyed. It may be observed that pleuro-pneumonia was declared by the inspector of the local authorities to exist in the premises in White's-row on April 24th, on which date there were ten cows in the sheds.

For some weeks past the inspectors of the Privy Council have been engaged in directing the cleansing and disinfection of the premises in which cattle plague had existed; this work is now completed. It is, however, intended to keep all these premises under observation for some time after the introduction of fresh stock.

This report was adopted after the following discussion had taken place:

Lord Powis mentioned that the restrictions which had been imposed in many cases were now being removed, in consequence of the cessation of fresh cases of cattle plague.

Lord ESLINGTON, M.P., and Mr. WAKEFIELD, having asked for information in reference to the Whitechapel case of alleged cattle plague,

Professor SIMONDS stated that in consequence of what had been considered the doubtful character of the Whitechapel case, he had been requested to examine the animals as well as the carcasses of one which had been slaughtered. This he was shown, together with the lungs, which were distinctly affected with pleuro-pneumonia, but he had great doubt whether the latter had been taken out of that carcass. On visiting the animals which were ill in the shed he found there three cows, two of which were unwell, while the other was perfectly healthy. One of these animals gave unmistakable evidence of disease of the lungs, and the other unhealthy animal gave indications of cattle plague. The animals were placed under the care of a policeman until the following day, when he again visited the shed, and found that two other cows had been secreted—i.e. had been taken from the animals the previous day, and put in another part of the premises where one would scarcely have supposed any man could put two cows. This made him more suspicious as to what was going on, and on examining those two cows, he found evidence of serious illness, and symptoms of those allied to cattle plague. At this time there were only four animals left, one he had seen on the previous day being now dead. This animal was the one to which he had referred as exhibiting symptoms of the disease of the lungs. He proceeded to make a *post mortem* examination, and the indications that examination afforded were such as would only lead one to suspect the existence of cattle plague in the remaining animals. Under the circumstances it was deemed right and prudent to take the same course as would have been adopted if there had been no doubt that the disease was cattle plague.

Mr. Jabez TURNER wished to ask Professor Simonds for an expression of his opinion, whether it was possible for cattle plague and pleuro-pneumonia to exist in the same animal at the same time. He had heard it frequently stated in the country that many animals which had been killed as suffering from cattle plague were in reality only affected with pleuro-pneumonia.

Professor SIMONDS said he had no hesitation in answering the question. There could be no doubt whatever that the two diseases could exist in an animal at the same time. An animal suffering from pleuro-pneumonia will sometimes live two or three weeks, and, if exposed to the infection of cattle plague, it would very likely take it, and die from cattle plague, and not from pleuro-pneumonia.

Animals also in whom the infecting materials of pleuro-pneumonia were incubated were equally liable to the infection of cattle plague.

The Committee had also received the following report from their Inspector, Mr. Duguid, in reference to the Hull case:—

At the request of Professor Brown I visited Hull on May 6th to examine a reported case of cattle plague on the premises of Mr. Kirby, Lincoln-street.

The animal was one of a stock of five cows, and had been examined by the local Inspector, Mr. Freeman, and also by another veterinary surgeon, and pronounced to be suffering from cattle plague.

The cow showed some, though not all, the symptoms characteristic of the disease, and I had some doubt whether she was really suffering from rinderpest or not, but on making a *post mortem* examination my doubts were removed, and I then confirmed the opinion of the local Inspector, and the other four animals in the shed were slaughtered by order of the local authority.

The cow had been bought of a dealer only a short time previous, but the fact that two other cows which had been brought into Hull along with her remained healthy precludes the idea of the contagion being brought by her into the shed.

A period of six weeks had elapsed since a case of cattle plague had been seen in Hull, and no light has yet been thrown on the source of contagion.

PLEURO-PNEUMONIA EXPERIMENTS.—In the report presented to the Royal Agricultural Society in December last on the pleuro-pneumonia experiments being conducted at the Brown Institution, it was stated that as soon as all the animals had been inoculated, or exposed to the contagion of pleuro-pneumonia by contact with the organs of diseased animals which had been slaughtered, they would then be subjected to cohabitation with animals suffering from the disease. The existence of cattle plague in the Metropolis, and the consequent necessary restrictions on the movements of animals within the Metropolitan area, have for some time past precluded the movement of the experimental cattle into infected sheds, and therefore the final and important part of the series of experiments has been delayed. Professor Brown has kindly offered to assist in obtaining infected premises for the purpose as soon as the cattle plague regulations cease, and it is to be hoped that in a short time the present series of experiments will be concluded.

The whole of the animals have been inoculated with the exudation liquid obtained from pleuro-pneumonia lungs, most of them in more than one way, and some have, in addition, been brought into contact with the lungs of diseased animals that had been slaughtered while suffering from the disease. None of them have become affected with pleuro-pneumonia as the result of these inoculations, and with one exception they have all remained in good health. The exception referred to is the case of one cow, which died on the 24th day after inoculation, but the cause of death was not pleuro-pneumonia.

FOOT-AND-MOUTH DISEASE.—Although at first some difficulty was experienced in communicating this disease, four of the experimental animals have become affected with it by feeding them with hay moistened with the saliva of diseased animals. And had the virus of foot-and-mouth disease been more readily obtained, the others would in all probability have been infected before the present time. The first opportunity that offers they will be subjected to the influence of the virus.

SHOW-YARD CONTRACTS.—Mr. JACOB WILSON (chairman), reported that the Surveyor reports that the show-yard works at Liverpool are not in so forward a state at this time as in previous years, owing partly to

the contractors being new to their work, and partly to the delay caused by the cattle plague during the greater portion of April. The Surveyor has given his personal and almost constant attention to these works (since it was decided to proceed with them at the last meeting of the Council) in directing and assisting the contractors, and by continuing so to do he hopes to get the show-yard ready for use in due time. The railway siding for stock is in progress, but the second line and the two docks, recommended by the Committee, are provided for in another way. The laying down of the pipes to supply the show-yard with water is also in progress, and the works undertaken by the Liverpool authorities are well forward. The Committee recommend that the contractor be paid the second instalment of £2,000 as duly certified by the Surveyor, and they further recommended that enamelled numbers for cattle and horses be provided. This report was adopted.

STOCK PRIZES.—Mr. MILWARD (Chairman) reported the recommendation of the Committee that the Liverpool local committee be asked to nominate judges of hams and bacon, and that two gentlemen nominated as inspectors of shearing be duly appointed. This report was adopted.

IMPLEMENTS.—Mr. HEMSLEY (Chairman) reported the recommendation of the Committee that a sufficient acreage of wheat and barley be set apart for the trials of sheaf binding machines, and that three gentlemen be appointed to act specially as judges of them.

CATTLE PLAGUE EVIDENCE.—Mr. RIDLEY, M.P., reported that the Committee met on Wednesday, May 2nd, at 2 p.m., when he was elected Chairman, and the Committee roughly sketched the following programme of what they considered should be the heads of inquiry by the select Committee, and resolved to inform themselves as far as possible of the decision come to by that Committee as to the scope of their inquiry, and the nature of the evidence they intended to take, with a view to considering their own further action:—

A. Foreign Live Stock.

- Principal sources of supply of Foreign Live Animals.
- Regulations in different countries with reference to exported stock.
- Manner in which these regulations are carried out at ports of embarkation.
- Proportion of diseased cargoes from each country.
- Method of transit from exporting to importing countries.
- Reception and treatment at ports of debarkation.
- Facts relating to the recent outbreak of cattle plague.
- Importation of pleuro-pneumonia.
- Importation of foot-and-mouth disease.
- Estimate of loss in home protection of meat and milk.
- Deterring effect of imported diseases on the home breeding and feeding of stock.

B. Foreign Meat Supply.

- Existing supply.
- Comparison of the condition of foreign, American, and Scotch meat.
- Recent development of the American trade and probability of summer supply.
- Effect on the price of meat.
- Probabilities of future meat supply, especially what proportion of foreign live stock would be likely to be sent here as dead meat if their importation as live animals were prohibited.
- Importation of hides, horns, &c.
- Regulations that may be necessary to prevent importation of diseases with hides, &c.

C. Amendment of the Act of 1869.

Since this time the Committee had been favoured by the courtesy of the Chairman of the House of Commons Committee with a copy of the shorthand writer's notes of the evidence given before that Committee. The Committee again met yesterday (Tuesday, 5th inst.), and discussed the various heads of their programme in connection with the evidence already given before the House of Commons Committee. They made one or two additions to that programme, and agreed upon the names of witnesses whom they thought it would be desirable should be examined by the Select Committee in case it should be necessary to supplement the evidence brought from other sources before them. In view of some necessary clerk's work, in digesting some of the evidence which may be brought forward, the Committee asked for a grant not exceeding £25, to be placed in the hands of the Secretary. This report was adopted.

A letter from Mr. RIDGEN, resigning his seat on the Council, on the ground of ill-health, having been read, it was moved by Lord Chesham, seconded by Mr. Milward, and carried unanimously, that Mr. Ridgen be requested to reconsider his determination.

It was moved by LORD FEVERSHAM, seconded by Lord CHESHAM, "That the Secretary be requested to represent, on behalf of the Council of the Royal Agricultural Society, to those railway companies who have prohibited the conveyance of cattle in horse-boxes, that much inconvenience will be caused thereby to the agricultural interest, and that it would be a great advantage if they would provide horse-boxes or other vehicles suitably fitted for the conveyance of valuable cattle."

Lord Powis explained that the action of the railway companies was due to the issue of an Order by the Privy Council, but that several railway companies had already relaxed the rule which they felt it their duty to make, in consequence of having obtained permission to do so from His Grace the Lord President of the Council.

The resolution was then carried unanimously.

Letters of thanks were read from recently-elected honorary members.

An application from the Council of the Shorthorn Society for permission to hold their annual meeting of members in the members' tent in the Society's showyard, on Thursday, July 12th, was unanimously granted.

SHORTHORN.

A meeting of the Council of this Society was held at the Society's rooms, 12, Hanover-square, on Tuesday the 5th ult. Present—Lord Skelmersdale, in the chair, The Earl of Dunmore, Colonel Guster, Colonel Kingscote, C.B., M.P., Colonel Loyd-Lindsay, M.P., Mr. Hugh Aylmer, Mr. H. W. Bestford, Mr. T. C. Booth, Mr. E. Bowly, Mr. W. Talbot Crosbie, Mr. F. J. S. Foljambe, M.P., Mr. C. Howard, Mr. A. Mitchell, Rev. T. Staniforth, Mr. R. Stratton, and Mr. Jacob Wilson.

The following new members were elected:

Bruce, John, Barmoor Castle, Beal, Northumberland.
Graham, William, The Lodge, Highbury, N.
Hansman, W., Coltsford Mills, Oxford, Godstone, Surrey.
Higgins, E. H., Maches-place, Newport, Mon.
Horn, Earl, Gopsall, Atherstone.
Machall, John, Chalton Park, Belford, Northumberland.
Sevenson, A. O., Blairhinnoch, Banff, N.B.
Stott, John, Greenheads, Muchalls, Stonehaven, N.B.
Walker, Thomas, Stowell Park, Northleach, Gloucester.
Wren, Walter, Grazeley-court, Reading.

EDITING COMMITTEE.

Colonel KINGSCOTE reported that the Committee had had before them the pedigree of a bull sent for entry in the Herd Book named Duke of Kirklevington, and whose great grandam was stated to be Lady Kirklevington, by Grand Duke of York (12966), out of Kirklevington 9th. The Committee had carefully examined the various entries in the Herd Book of Kirk-

Levington 9th's produce, and they found no record of her ever having had a calf by Grand Duke of York, although her produce has been carefully and regularly recorded up to the time of her ceasing to breed. The Committee were therefore of opinion that in this respect the pedigree of the bull as given was incorrect. The Committee, however, further reported that another pedigree, of the same family as the bull in question, had been sent in for entry by the Rev. P. Graham. The Committee, from evidence which had been placed before them, and from a careful investigation of the matter, believed that the pedigree as given by the Rev. P. Graham was correct.

The Committee had also investigated two other pedigrees, and directed the Secretary to send suitable replies.

GENERAL PURPOSES COMMITTEE.—Mr. JACOB WILSON reported that the accounts for the month of May had been examined by Messrs. Quilter, Ball, and Co., and the Committee, and were found to be correct.

The Committee also reported that the Secretary's petty cash account had been examined and passed, and showed an expenditure of £11 7s. during the past month; that the receipts for the month of May had been £161 6s. 6d., the balance of the Society's current account at the bankers being £672 16s. 5d.

The Committee recommended that the sum of £1,000 be invested in Three per Cent. Consols in the name of the Shorthorn Society of Great Britain and Ireland, and that the Secretary be empowered to instruct the bankers to take the necessary steps thereto.

The Committee also recommended the payment of various accounts, rent, and salaries amounting to £349 17s. 4d.; and that the Secretary make arrangements with the Society's auditors for the auditing of the Society's accounts, to the end of 1876, previous to the general meeting of members in July.

The Committee further reported that Mr. George Savill, Ingthorpe, Stamford, and Mr. R. E. Oliver, Sholebrooke Lodge, Towcester, had resigned their seats on the Council.

This report was adopted.

On the motion of Mr. JACOB WILSON, and seconded by Colonel KINGSCOTE, it was resolved:—"That an application be made to the Royal Agricultural Society of England for the use of their members' tent in the showyard at Liverpool, for the purpose of holding the annual general meeting of members of the Shorthorn Society, on Thursday, July 12th, at noon."

The next meeting of the Council was fixed for Tuesday, July 3rd, at 3 p.m.

ROYAL AGRICULTURAL BENEVOLENT INSTITUTION.

The seventeenth anniversary festival of this institution was held last Wednesday, June 6, at Willis's Rooms, and was attended by nearly one hundred gentlemen. The Earl of DUMFRIES presided, and among those present were: Sir H. J. Maxwell, Mr. J. J. Mechi, Mr. R. Leeds, Mr. Thornton, Mr. H. L. Druce, Mr. C. S. Cantrell, Mr. J. Odams, Mr. Charles Shaw, Mr. T. C. Scott, Mr. J. Prout, Mr. W. Vivian, Mr. F. J. Owen, Mr. A. Garrett, Mr. J. K. Fowler, Mr. J. Collins, &c.

After the usual loyal toasts had been proposed from the chair, and cordially responded to,

Mr. T. C. SCOTT gave "The Army, Navy, Militia, and Reserve Forces; Sir H. J. MAXWELL responding for the Navy, and Capt. EDWARDS for the Reserve Forces.

The CHAIRMAN said the next toast was one respecting which he regretted that it had not been entrusted to able hands than his own. It was with extreme diffidence that he had risen to ask them to drink "Prosperity to the Royal Agricultural Benevolent Institution;" and he hoped they would bear with him while he made a few brief remarks on that most valuable, servicable, and charitable Society (cheers). When he came to consider that in former years the institution had enjoyed the great privilege of having such eminent and illustrious statesmen as Lord Beaconsfield, Lord Derby, and the late Lord Lytton to preside at its anniversary festival, and when he remembered, too, that in later years his Royal Highness the Prince of Wales had also occupied the chair which he was now so unworthily filling, he could not but appreciate the great compliment which had been paid him in his being asked to preside on that occasion. Although he would not be presumptuous enough to attempt to handle the subject before them in the able manner in which it was dealt with by his predecessors, yet he would declare that he yielded to none of them in the interest which he took in the work of the Society (cheers); and when he saw how much good it had done, and the extent of the claims made upon it, he wondered how the agricultural body was able to go on so long as it did without such an agency for the relief of those connected with it who had fallen into distress. And this reminded him of a fact which must never be forgotten so long as that charity existed, namely, that all honour and praise was due to a gentleman whose name had been so long connected with scientific experiments in relation to husbandry—he meant his friend Mr. Mechi, the founder of the Institution (cheers). In presiding, in 1860, at the first festival, the present Prime Minister, in the course of his remarks on the position and characteristics of the British farmer, observed that intercourse diffused not only knowledge but something more precious than knowledge, namely, sympathy. He quite concurred in that opinion. Sympathy was one of the noblest attributes of our

imperfect nature. It was sympathy which led to the formation of that great organisation; it was mixing with farmers of every class, and especially coming in contact with poor struggling occupiers, which produced that bond of sympathy between the founder of that Society and his agricultural friends that resulted in the formation of an institution which might truly be called one of love and charity (cheers). The British farmer played not the least important part on the stage of human life. The merchant princes of this country made thousands a year in commerce, and the resources of the country were deemed almost inexhaustible; but, after all, it was to the soil of the United Kingdom and those who tilled it that the people of this country would look for their best supplies of produce. As years had rolled on, and civilisation had extended, the bond of sympathy between owners of land and the tillers of land had been more and more strongly cemented, and he had no hesitation in saying that it was to the friendly feelings and cordial relations between the two classes that we were indebted for much of our national greatness (Hear, hear). It was sympathetic interest for those who belonged to one's own class, and that truly British feeling, the desire of the strong to assist the weak, which led to the formation of a society having for its object to provide for farmers, and the widows and orphans of farmers, who had been overtaken by misfortune. Almost every profession and trade had an institution having a similar object, and in none could one be more needed than in the vocation of the farmer. A great many people thought the farmer had a very nice and very easy time of it. Fine, healthy, outdoor exercise; entire exemption from panics like those connected with the operations on the Stock Exchange, bringing innocent people to ruin; freedom from anything like hard manual labour; having nothing to do but put the seed in the ground, see it come up, cut the grain, harvest it, thresh it, sell it at a good price, and put the money in their pockets—such were the ideas which many persons had of the life of a farmer. But let such people look for a moment at the reverse of the picture (Hear, hear). Let them think of fitful atmospheric changes, of foot-and-mouth disease, of rinderpest, or of blights, of drought, and excessive rains, and then consider that if it were not for the existence of that Institution those who had been ruined by such soils as these would have had nothing to save them from utter destitution. In some cases the seed-bed was as hard as iron; then, again, there was the turnip fly; if the crop escaped the fly it fell a prey, perhaps, to mildew, and it was always liable to injury from storms. Still more serious was the loss sustained on many farms by disease among cattle. And here there arose a most important question relating to the supply of meat in this country, and one which deeply concerned the welfare of agriculturists as a body. He himself took what might be called a "very stiff" view of that subject. He maintained that so long as any serious disease prevailed in this country, foreign live stock should be prohibited from entering it (Hear, hear).

The live stock imported to assist in feeding the nation amounted altogether to only about 5 per cent. of the total consumption; while the imported dead meat was about 7 per cent., leaving 88 per cent. for home-bred live stock. Would it, he asked, be impossible for English farmers to make up the 5 per cent. by increased production, so that the country would not be at all dependent on supplies from abroad? (Hear, hear). Would it not be possible to secure that object by laying down a little more land for pasture? The rinderpest existed to a large extent on the Continent, and many cattle had in consequence to be slaughtered. No money payment could compensate English agriculturists for its introduction into this country. Some of the chief breeds of cattle had been built up, as it were, through many generations, and no amount of money could replace them if they were once lost; and so long as serious disease existed in this country the importation of live stock should be stopped. He might, perhaps, be asked what all that had to do with the affairs of that Institution. He would reply, that a large number of the recipients of the bounty of that Institution had become so in consequence of losses sustained through the spread of disease among cattle. It appeared that since the Institution was established in 1860, £55,000 had been expended in the relief of disease, and that no less than 610 persons had been recipients; and he would like to know how much of that distress arose from diseases among stock. If there had been no disease among cattle, there would not have been much necessity for the aid of that Institution; relief would then only have been required in cases in which farmers had lost their crops through some of those visitations of Providence which no amount of human foresight or care could avert. It was proposed to make at the forthcoming election an addition of forty-four to the present number of pensioners, thus increasing the already heavy demand on the income of the Institution by £928, and raising the total expenditure to about £10,000. At the present time there were in the receipt of annuities 90 male pensioners, 37 married couples, 204 widows and unmarried orphans, 14 octogenarians who had been un-

successful candidates; and besides the adult pensioners there were 50 orphan children, between 7 and 15 years of age, who were being educated and maintained. Of the £9,000 odd expended in the last year only about £800 was derived from investments, and the fact that the large balance was provided by means of donations and annual subscriptions was a gratifying proof of the vast amount of interest which agriculturists felt in that Institution. As a Scotchman he regretted to see so few names of his own countrymen in the list of contributors, and when he returned to Scotland he would certainly take care to urge its claims upon their attention (cheers). Perhaps some of them might tell him that Scotch farmers managed their holdings too well to be likely ever to need assistance, while others might hear of the Society from him for the first time; but he would do his best to obtain subscriptions. And now, having shown, as he trusted he had done, that the Institution deserved every encouragement, combining as it did the education and maintenance of the young with the protection of the old, he would call upon them to drink the toast, coupling with it the name of the founder of the Institution, Mr. Mechi (loud cheers).

Mr. MECHE briefly responded, and proposed the health of "The Chairman," which was drunk with great cordiality.

The remaining toasts were "The Executive Council," proposed by Sir HERON J. MAXWELL, and responded to by Mr. A. H. JOHNSON; "The Secretary" (Mr. C. Bosfield Shaw), proposed by the CHAIRMAN; and "The Honorary Local Secretaries," proposed by Mr. C. S. CANTRELL, and acknowledged by Mr. F. SHERBORNE.

The aggregate donations and subscriptions announced at the Anniversary was nearly £11,000, this sum including Her Majesty's annual subscription of 25 guineas, the same amount from the Chairman, and legacies of £1,000 each from the late Mr. George Moore and Mr. T. Congreve.

A selection of vocal music was performed, to the manifest satisfaction of the company, by Miss Florence Winn, Mr. Winn, and Mr. Wilford Morgan.

CHAMBERS OF AGRICULTURE.

BEDALE.

VALUATION BILL.

A special meeting of the Bedale Chamber of Agriculture was held on Monday, May 28th, at Bedale, Captain Clarke, the President, being in the chair. There was a good attendance of members. The matter which the meeting had been called to discuss was to examine three clauses of the Valuation Bill. The Chairman opened the question by saying that Clause 31 stated "That House-tax and Income-tax shall be charged upon the gross value in the list in force on the day on or before which such tax is payable." Mr. Hubbard will move an amendment to leave out the word "gross," and insert the word "rateable." Mr. Smith moved, "That this Chamber supports Mr. Hubbard's amendment that the rateable value be the basis for Income-tax."

Mr. POOLE seconded, and the resolution was carried.

The CHAIRMAN said the most important amendment in reference to farmers was with regard to Section 105. According to the Bill the Assessment Committee had power to fix what was the gross value, whereas the amendment of Mr. C. S. Read, M.P., fixed the actual rent as the gross value. If that amendment was carried it would work very unfairly in this district.

Mr. WALKER contended that the Chamber ought to protest against Mr. Read's amendment, because in this neighbourhood the rental was anything but uniform, the rent of property on one side of a hedge being double what it was at the other. He moved a resolution to the effect that the Chamber protest against the amendment, and support the original clause in the Bill.

After some discussion this was carried.

CHESHIRE.

The half-yearly meeting of this Chamber of Agriculture was held on the 26th May, at Crewe, Mr. W. E. Court, Middlewich, in the chair.

The SECRETARY, Mr. Thomas Rigby, read the report of the Council, from which we extract the following:—

The half year which has passed since our last annual meeting has been occupied on three occasions by the Chamber in discussing subjects affecting agricultural interests out of Parliament, and by three meetings of the Council, at which the Cattle Plague Resolutions and the Valuation Bill have been duly considered. The reported outbreak of cattle plague in London and in Hull, at the end of January, created much anxiety in this county, and led the magistrates at once, as the Cattle Plague Authority, to adopt precautionary measures against its introduction into their district; and the Council of this Chamber, at its meeting on the 15th of February expressed satisfaction at their prompt action, and resolved to aid the observance of their regulations to the utmost. On March the 10th the Council discussed the question more fully, and resolved, "That this Council is of opinion that all orders applying to the movement of cattle in separate counties should emanate from one authority only, and not be left to county and borough authorities with frequently differing and opposing action"; "That no cattle should be moved, either by rail or road, through an infected district without a license"; and, "That all importation of live stock from European countries should be entirely stopped for the present." The necessity of the first resolution is proved even in our own country by the fact that, although cattle are prohibited from coming by rail into the district of the county Local Authority, there is no rule against their coming through that district and being unloaded in any one of the boroughs, which might thus

become centres of infection and practically destroy the benefits of the more severe restrictions enforced in the county, and it is only due to the very diligent watchfulness of the Government over the outbreaks of cattle plague, and the prohibitory measures in the districts where it has shown itself, that this has not occurred. There are difficulties in the way of enforcing uniform regulations in the whole county in consequence of the different authorities that exist, but direct Government action might supersede these for a time as in the case of the metropolis and of Middlesex at present, and should the plague unfortunately show itself in Cheshire your Council hopes it would be promptly treated in the same way. The patience with which the Cattle Plague Regulations of the year have been borne in the county indicates a willingness to co-operate most heartily with the authorities in doing everything possible to prevent the visitations of the plague, and your Council would point to the general freedom from all infectious diseases in cattle as one of the advantages of such compliance. It is probable that we should have had more pleuro-pneumonia and foot-and-mouth disease in the county during the spring, judging from past experience, if it had not been for the restrictions imposed by the Cattle Plague Authority; and now that the county of Middlesex, the chief centre of cattle plague, is prohibited from sending cattle alive out of its boundaries, and the action of the authorities is successful in confining its progress therein, it is hoped it will soon be stamped out altogether. Your Council hopes that Cheshire may be spared this visitation also. The second resolution of the Council, "That no cattle should be moved either by rail or road through an infected district without a license," your Council would now make more restrictive, and prohibit such movement altogether, except for immediate slaughter, until the district had been clear of cattle plague for forty days. The third resolution, desiring the importation of live stock from European countries to be stopped for the present, must commend itself as most desirable to all the breeders and graziers of the country. Whether it is one that should be continued will probably be reported upon by the Committee of the House of Commons inquiring into the whole question of cattle diseases and the dead-meat trade of the country, but to your Council it appears obvious that the importation of live cattle from countries where the plague is known to exist almost constantly is fraught with the utmost danger; and they think that if a dead-meat trade with the Continent, similar to that now existing with America, were substituted, it would be attended with benefit to both producers and consumers of beef and mutton. The arguments used against this course are that the markets would sometimes be so glutted as to entail great losses upon the exporter, and that the offals would be lost as an article of food to the poor of our large towns. The report of the Committee will probably make this more clear to us than it is now, but your Council would say that a prudent use of telegraphic communication would enable the exporter to make himself acquainted with the probable quantities of meat coming to London, and enable him to decide whether to slaughter his beasts at the ports of embarkation at once, or keep them back for the next market; and that some mode of preserving the offals, either in a raw or preserved state, may surely be discovered, so as to make them still available for food. There can be no doubt that a large number of young stock would be reared and fed in this country if farmers were better insured against the invasion of these fatal diseases, and this would more than supply any possible loss to consumers that could arise from the prohibition of imports. The discussion of the Valuation Bill of the Government resulted in the resolution "That this Council greatly disapproves of the power the Bill proposes to put into the hands of the Surveyor of Taxes, and strongly objects to his official interference with any decision of the assessment committee, or of any of the courts of appeal, as given to him in clauses 11, 19, 35, 38, and 43 of the Bill. They have no objection to copies of valuation lists being supplied to him, or any information needful to his office, but think it should be limited to his use as a Government official;" and this resolution was forwarded to Sir Philip Grey-Egerton, Bart., M.P., as one of the county members. Your Council regrets to have to state that the required number of 20 pupils at the Sandbach Grammar School to free the guarantors from pecuniary responsibility is not yet complete, there having been only 15 in attendance the first quarter of this year and now only 18, and would urge again upon parents having sons whom they think of making

into farmers or land agents to avail themselves of the advantages provided in the school for suitable education in those professions. Your Council are glad to state that the scholarships of the Royal Agricultural Society of England are now open to the pupils of the Sandbach Grammar School, and that they are awarded by examiners on general competition in the usual way. The show of the Society being this year held at Liverpool will bring its advantages within the knowledge of residents in this and the adjoining counties, and your Council hope that, with favourable weather, it may realise a great success.

The report was adopted, and after the transaction of some unimportant business the meeting terminated.

EAST KENT.

THE VALUATION OF PROPERTY BILL.

At a meeting of the East Kent Chamber of Agriculture held at Canterbury on Saturday, May 26th, the above Bill was discussed and the following resolutions were adopted:—

1. That this Chamber approves of the Clause in the Bill defining the gross value.
2. That the Chamber is of opinion that house and income tax should be charged on the rateable value and not on the gross value as proposed in the Bill.
3. That the Chamber supports Mr. Rodwell's proposition for a Valuation Board to be formed in every county.
4. That the members for East Kent be requested to support the rejection of Clause 84, which entitles any incumbent or holder of an ecclesiastical benefice to deduct from his rateable value the salary he pays to a curate."

EAST RIDING.

The monthly meeting of this Chamber was held at Beverley on June the 2nd, Mr. J. Crust (Catwick), the President, in the chair. The Chairman congratulated the Chamber on the removal of the cattle plague restrictions, and observed that it was clear all infection had been stamped out, as he did not hear even of foot-and-mouth disease. He considered the magistrates of the Riding were to be commended for the energy with which they had acted throughout, and their general desire to prevent the spread of disease, the meeting on the previous Thursday, when they prohibited the removal of cattle from Hull into the Riding, being an additional proof of their vigilance. These remarks were endorsed by several members. Mr. Langdale, who moved that the thanks of the Chamber be accorded to the East Riding Justices for their promptitude, observed that the time would probably come when the importation of foreign cattle would be prohibited. Mr. D. Bradley (Eton) seconded, and the motion was carried.

GLOUCESTER.

VALUATION BILL. HIGHWAY FENCES.

On May 26th, a meeting of this Chamber was held at Gloucester, the President, Mr. T. Cadle, in the chair.

RATING VALUATION BILL.—The opinion of the Chamber was asked by the Central Chamber in regard to certain points in this Bill, which is now before Parliament, and a long conversational discussion took place. The unfairness of property being valued at a rate beyond the rental was pointed out, while several members considered that the actual rental might without injustice be deemed the minimum value. It was remarked that not unfrequently the village carpenter or blacksmith, who knew nothing of the value of property, was elected as overseer; but it was replied that representative government ought to supply the remedy for this, and that if ratepayers did not elect better qualified men to the office than those of such a class they deserved to suffer. Ultimately, on the proposal of Mr. D. Long, seconded by Mr. S. Priday, the following resolution was adopted:—"That, in the opinion of this Chamber, no hard-and-fast line should be drawn with regard to making the actual rental of property the gross value, but they would prefer that Clause 38 of the Bill should remain as it is."

The next point discussed was the question of taking the rateable value as the basis for income tax.

The CHAIRMAN said the rental was generally adopted as a basis, but where the overseers and assessment committee have put property higher than the rental, the Income Tax Commis-

sioner have the power to take which they please, and they generally took the highest.

Mr. BARWICK BAKER would like to see the rateable value made the basis, but he saw no change of this being conceded.

The CHAIRMAN said it was very unfair to assess the income tax on the gross value.

Mr. H. BUTT proposed the following: "That this Chamber is of opinion that the rateable value ought to be the basis for levying the income tax instead of the gross value." He himself was assessed upon the gross value, and was yearly paying income-tax upon what he never received.

Mr. T. SMITH seconded the motion, which was carried.

The CHAIRMAN said the next subject sent them for consideration was "Special County Boards of Appeal."

As there were no county boards yet in existence it was decided to pass the question over.

HIGHWAY LEGISLATION was the next subject discussed, and the following resolution was passed:—"That this Chamber is of opinion: the cost of distumping the roads presses heavily upon the ratepayers, and that all kinds of property should contribute towards the expenses of the main roads of the kingdom, which are used by the general public."

THE LAW AS TO AGRICULTURAL FENCES.—Mr. W. FRIDAY pointed to the importance of the law as to agricultural fences being properly understood. Lately there had been some important county court decisions, and it was therefore desirable the custom and the law should be made in unison, so that agricultural occupiers should know in what position they stood. It had been clearly decided that irrespective of any law or custom of the country it really behoved every occupier to fence against his own cattle. They knew that an occupier with a hedge in his field had a right to go a yard into the ditch on the other side. The walls on the Cotswold used as hedges were first put in order by the landlord, and the tenant was expected to maintain them. As regarded fences formed by watercourses, it was clear no such law could exist, and in such cases the boundary was supposed to be the centre of the stream. Each occupier must fence against his own cattle, and it was desirable some definite understanding should be come to. He proposed a resolution to the effect that the Council of the Central Chamber be solicited to discuss the liability of farmers to keep up agricultural fences.

This was put and agreed to, and the Chamber adjourned.

GOOLE.

A meeting of this Chamber was held on June 5th, at the Lowther Hotel, Mr. S. S. Laverack presiding. It was unanimously resolved to discontinue the contribution to the Central Chamber of Agriculture; and the secretary was instructed to communicate with the York Chamber with a view to an Associated Chamber of Agriculture for the county of York being formed.—*Leeds Mercury*.

HEREFORDSHIRE.

VALUATION BILL.

A general meeting of this chamber was held on May 26th, principally to consider Mr. Clare Sewell Read's proposed amendment to the Valuation Bill. The Lord Lieutenant (Lord Bute), who is the president of the chamber for the year, presided. The Chamber, having approved the general principles of the Government measure, proceeded to discuss Mr. Read's proposed amendments, the principles of which are—(1) that assessments should be made upon actual rental; (2) that the rateable value shall form the basis of assessment for the Income Tax; (3) that there should be special County Boards for appeal. The several points were discussed seriatim. As to the first it was resolved, on the motion of Mr. Duckham, "That, in the opinion of this chamber, property of all kinds should be rated at what it may reasonably be supposed to let at, regardless of the actual rent paid." Only one gentleman, Mr. C. Andrews, dissented, and he argued that, sooner or later, the actual rent paid must form the basis of assessment upon all kinds of real property. On the subject of the second of Mr. Read's proposed amendments to the bill, the following resolution was, after discussion, unanimously agreed upon: "That the rateable value should form the basis of assessment for the property tax." No action was taken with regard to the third amendment. Some remarks as to the desirability of

the importation of dead meat from abroad instead of live stock were made by Mr. Duckham, but no resolution was passed on the subject.

LEICESTERSHIRE.

THE VALUATION BILL.

At a meeting of this Chamber, under the presidency of Sir Archibald Palmer, Bart., the proposed amendments to the Valuation Bill were discussed.

Mr. T. WILSON said the most important amendment stood in Mr. C. S. Read's name, and it proposed to make rent the basis of gross value, which was a similar principle to that embodied in the Scotch Bill of 1854. In a great many cases he thought they could not do better than take the gross value from the rent, which would do away with a great deal of the feeling connected with the surveyor of taxes. In the Bill of last year the rent was to be taken as the minimum value, and now Mr. Read proposed that it be the maximum, and if this were adopted the surveyor of taxes would not be such a bug-bear to the assessment committee as the Bill of last year proposed to make him. Another proposal by Mr. Read would considerably affect county owners, and meet the difficulty assessment committees had in rating gentlemen's large houses. Mr. Read had proposed an amendment on clause 10, to the effect that where the assessment committee is of opinion that any building, by reason of its size or structure, or of its being adapted only for some special purpose, or any other reason, cannot be properly valued according to the rent which, taking one year with another, a tenant might reasonably be expected to pay, and that the gross value of such building, as entered by the overseers in the valuation list, is not sufficient, it shall be lawful for the assessment committee, notwithstanding any provision to the contrary, to determine the gross value of any such building with reference to the actual value thereof to the person occupying the same, and they may alter the list accordingly. The effect of this, as he understood it, would be that where a man laid out a large sum of money, at say 6 per cent., the assessment committee generally put an extra 6 per cent. on the rent. Whenever a farmer laid out money on a farm it was valued directly, and he thought the same principle should apply to gentlemen's houses. Mr. Rodwell had given notice of an amendment to establish County Boards, and make them the Courts of Appeal instead of the County Quarter Sessions as at present. Notice of another amendment would also be given to the effect that the value of tithes having fluctuated so little for many years past, it was no longer necessary that they should be continued but become a fixed charge of £100. Great injustice had sometimes been done in the payment of tithes in times when prices had run exceptionally high, because those who had got the high prices often got off, and those who came after them had to pay the higher sum. Mr. Willson concluded by moving, "That this Chamber approves of Mr. Read's amendment to make rent a test of gross value."

Mr. RICHARDSON seconded the motion.

Several members objected to the principle as unfair, and Mr. Willson's motion was lost on a division.

An amendment to make tithes a fixed charge of £100 in consequence of having fluctuated so little during the past few years was approved.

Mr. WILLS then moved, "That this Chamber approves of Mr. Read's amendment on clause 100, respecting the value of buildings, &c., according to their actual value to the persons occupying them."

Mr. BRICKWELL seconded the motion, which was carried *unanimously*.

A proposal of Mr. Read to make the Assessment Committee responsible for the signing of the overseer's rate books instead of the magistrates, was also discussed; and several gentlemen doubted whether any benefit would result from such a change.

Mr. WILSON then moved that the Chamber approve of Mr. Rodwell's amendment to establish County Boards and to make them the Court of Appeal instead of the County Quarter Sessions, as at present. He stated that it was somewhat of an anomaly to have cases first of all heard by the magistrates in Petty Sessions, and then the same magistrates to decide on the appeal at the Quarter Sessions.

Mr. RICHARDSON seconded the motion, which was carried.

LINCOLNSHIRE.

CATTLE PLAGUE RESTRICTIONS.—LOCOMOTIVES ON
ROADS BILL.

A special general meeting of this Chamber was held at Lincoln, on May 25, Mr. Thomas Garfit presiding.

The special business for which the meeting was convened was to consider whether, in case there should be no further outbreak of cattle plague, the time has arrived for the re-opening of markets, fairs, exhibitions, and sales of cattle, within the county of Lincoln.

The SECRETARY stated that he had received the following resolution passed by the Lincoln Town Council on May 7th, in reference to resolutions of the Chamber, adopted at their meeting on the 29th March, in reference to the cattle plague: "That the Town-Clerk acknowledge the receipt of the resolutions, and that the Chamber be informed the Council are of opinion that owing to the action, they believe, of the Chamber most vexatious restrictions still exist as to the removal of cattle from the city of Lincoln to other parts of the county, so that the city is perfectly isolated, inasmuch as cattle cannot be sent from the city for pasturage in the marsh districts or elsewhere in the county, and the Council is of opinion that such restrictions should, so far as regards the city of Lincoln, be immediately removed."

Mr. TROTTER said that after what had occurred at the meeting of the Lincoln Town Council, he did not know whether it was necessary they should take any notice of their resolution. Perhaps, however, it would only be courteous to do so; but really the remarks that had been made with reference to this Chamber were of such an ill-conditioned character that the best way probably would be to say as little as possible in reference thereto. At the same time, he must say many of the observations made could not be borne out by the facts, and as it was desirable that the public should not be misled in the matter, he had requested the secretary to epitomise the action of the Chamber in reference to the cattle plague, so that the public might be able to judge whether the course they had taken was or was not a right one.

The SECRETARY, at the request of Mr. Trotter, then read as follows:—"From the reports of recent meetings of the Lincoln Town Council, it appears that the action of this Chamber has been very much misrepresented. The intention of the Chamber has been to secure uniformity of action throughout the county, and to take every practicable means for keeping out of it the much dreaded rinderpest. The Chamber was formed to watch over these and kindred matters as well as the legislation of the country affecting agricultural interests. With this view a special meeting of the Chamber, attended by upwards of 30 members from different parts of the county, was held on the 2nd of March—shortly after the outbreaks in the Metropolis and at Hull, and when new cases were being reported almost daily, at which it was resolved unanimously, that in the opinion of the Chamber it was very important to prohibit the entry of all stock (cattle, sheep, pigs, and goats) into the county of Lincoln, the city of Lincoln, and the several boroughs of the county during the month of March, and the meeting suggested that all the Local Authorities of the county, city, and boroughs should take immediate steps for carrying such resolution into effect, and the meeting further resolved that steps should also be taken for the closing of the various markets, fairs, and fat cattle sales within the county up to the 1st April. Copies of these resolutions were forthwith sent to each of the Local Authorities for the city and boroughs of the county, and, as the Executive Committees for the three divisions of the county happened to be then sitting, a deputation went direct from the meeting to lay before the magistrates the views of the Chamber. In the afternoon of the same day (2nd March) a joint deputation from the Lincolnshire Agricultural Society and the Chamber of Agriculture waited upon the Mayor of Lincoln and the Markets Committee of the city with regard to the removal of sheep from the fair ground, and they took occasion to communicate at the same time the suggestions of the Chamber above referred to, and to ask for the co-operation of the City Authorities. The Executive Committees for the county, and the Local Authorities for some of the boroughs, at once issued orders in accordance with the views of the Chamber, but the authorities of other boroughs, whilst they prohibited the introduction or importation of cattle from the neighbourhood of any infected district decided to keep open their markets and

fairs. This was leaving such markets and fairs open for cattle from places contiguous to infected districts, and possibly even from infected places by roundabout ways, or across the Humber. It was at the same time unfair to neighbouring towns, the markets of which had been closed. The refusal of such authorities to close their markets, even for a limited time, was brought under the notice of the grand jury for the county at the time of the Lent Assize, and they immediately directed that a memorial should be sent to the Duke of Richmond, setting forth all the steps taken in the matter by the Executive Authorities for the three divisions for the county, and by some of the boroughs, and the refusal of others to co-operate, and urging that an order should be issued by the Council closing the whole of the markets and fairs of the county up to 30th March, and prohibiting the introduction or importation of cattle into the city or county during the same period. It was in reference to this memorial that a deputation consisting of representatives from the County Authorities, the Lincolnshire Agricultural Society, and the Lincolnshire Chamber of Agriculture, waited upon the Duke of Richmond, and upon which the Privy Council issued their order of the 6th of March. Then followed the outbreak at Beelsby, which fully confirmed the wisdom of every step taken up to that time. No further outbreak occurring in Lincolnshire, and no case being reported at Hull later than the 22nd of March, a special meeting of the Chamber was convened on the 13th of April, to consider whether, in case of no further outbreak, the time had arrived for the re-opening of the markets and fairs. A meeting of the Council of the Lincolnshire Agricultural Society falling on the same day, their opinion was sought upon the question. Unfortunately a very serious outbreak occurred at Willeddon during the week previously, and the representatives of the two societies resolved unanimously that, in consequence of these outbreaks, a memorial should be presented to the Privy Council, asking them to continue their restrictions as to fairs and markets for the county, and to extend them to the rest of England."

The CHAIRMAN said that was a fair statement of their proceedings—but the real question for consideration was whether they themselves thought the time had not arrived for re-opening the markets. If they desired to make any proposition in reference to the proceedings of another body, this could be done afterwards.

Mr. TROTTER then said he would propose that in the opinion of the meeting the time had arrived for re-opening all markets, fairs, and exhibitions and sales of cattle in the county of Lincoln, excepting for cattle from Hull, Middlesex, or other infected districts.

Mr. SEARBY seconded the proposition, and, in spite of some opposition, it was carried.

Mr. TROTTER then moved, and Mr. SEARBY seconded, that the Privy Council be requested to alter the order of the 13th March last, so that its prohibitions shall apply only to the movement of cattle from Hull, Middlesex, or places contiguous thereto; that a memorial be prepared and signed by the chairman of this meeting, and that Sir W. E. Welby-Gregory, Bart., M.P., Mr. Hy. Chaplin, M.P., Mr. J. Banks Stanhope, Mr. T. Garfit, and Mr. T. Trotter, be requested to attend as a deputation on behalf of the Chamber, and present such memorial to the Lord President of the Privy Council. The Secretary was also directed to forward copies of the resolutions to the city and borough authorities.

In reference to the resolutions of the Lincoln Town Council, Mr. FRANKISH proposed, and Mr. DALTON seconded, that the Secretary acknowledge the receipt of the same, and refer the Corporation, in reply, to the resolutions passed by the Chamber to-day.

Mr. WALTER DUDDING then rose to suggest that the Chamber support the action of Mr. Mark Stuart in the House of Commons, who has given notice that he will "call attention to the varying and conflicting orders issued by Local Authorities for the suppression of contagious diseases among stock," and that he will move "that henceforward in any outbreak of cattle plague the Privy Council should supersede the local authority, and issue uniform orders throughout the country." Mr. Dudding urged that it was impossible to secure uniform action by the present system, and contended that the only means of doing so was by placing the power in the hands of the Privy Council. He repudiated any desire to cast any slur upon the present local authorities, stating his belief they were quite prepared for a proposition like that of Mr. Stewart's.

He proposed the following: "That this Chamber, feeling the insuperable difficulties and inconveniences arising from conflicting orders and lack of uniform action, cordially supports the action of Mr. Mark Stewart which he is about to take in the House of Commons, with regard especially to cattle diseases. This Chamber, however, wish it to be understood that their trust in and respect for local authorities is in no way abated."

Mr. PADDISON seconded.

The CHAIRMAN observed that the wording of Mr. Stewart's notice was very strong in wishing the Privy Council to "supersede" the local authority. A proposition that uniform orders should be issued would be more useful. He himself had not the faith in extreme centralization that Mr. Dudding appeared to have.

Mr. TROTTER also thought the wording very strong. His own impression was that the most useful plan on an outbreak of cattle plague being reported to the Privy Council would be for them to send down a commissioner, who would draw a cordon round the infected district for a certain distance, whether reaching to one, two, or three counties, and then making the orders uniform in that district.

Mr. DUDDING said he only desired them to support the principle contained in Mr. Stewart's notice.

Mr. EYTON thought they were quite safe, as at present, in the hands of the Local Authorities.

Mr. A. GARRETT said the action of the county magistrates, together with that of the Lincolnshire Agricultural Society and the Chamber of Agriculture, by immediately meeting together in times of necessity and consulting with the Local Authorities, was calculated to be of more benefit than sending memorials to the Privy Council. Local Authorities were able to take more immediate action, and do more good than leaving the matter in the hands of the Privy Council, who would take some time before they could work in local places.

Mr. FIELDSEND having spoken against the proposition, it was withdrawn.

The meeting then proceeded to discuss the "Locomotives on Common Roads Bill." After discussion, a resolution approving of the bill was passed, and it was recommended that the Quarter Sessions of counties should be constituted local authorities as well as those already provided for. Copies of the resolutions were directed to be sent to the county and borough members, asking them to support the bill.

SOMERSET.

A meeting of the Council of the above Chamber was held on June 1st, at the Mermaid Hotel, Yeovil, under the presidency of Mr. G. Urbin. There were also present Messrs. J. Feaver, S. P. Penny, G. N. Shore, R. H. Darby, W. Dyas, R. Dampney, R. Donne, B. S. Hebditch, W. S. Whatley, &c. The meeting was called for the purpose of considering Mr. Clare Sewell Read's amendment to the Valuation Bill now before Parliament—"That actual rental is the best source for arriving at the uniform gross value of real property," and also Mr. Hubbard's amendment—"That the rateable value is the best basis on which to assess the Income Tax."

STAFFORDSHIRE.

A general meeting of the Staffordshire Chamber of Agriculture was held at the Swan Hotel, Stafford, on May 26, Mr. J. Brawn presiding. The principal business was the proposed amendments of the Valuation Bill.

The CHAIRMAN said the object of the Bill was to secure a uniformity of valuation on real property, both for the purpose of local and imperial taxation.

Captain CRAIGIE moved the following resolution—"That the invariable adoption of actual rental as gross value would operate oppressively on those ratepaying tenants who pay the highest rents, and consequently are the least able to bear the burden; and that objections to valuations should be considered by Assessment Committees, and power given to appeal."

Mr. J. JAMES seconded the motion, which was carried.

The CHAIRMAN then proposed—"That the rateable value of real property, if properly assessed, represents the actual income, and is, therefore, the most equitable basis for income-tax under Schedule A."

The motion was seconded by Mr. YATES, and was carried.

It was then moved by the CHAIRMAN, "That appeals against the decisions of justices in special sessions should be heard by representative county boards."

Mr. YATES seconded the motion, which was carried.—*Derby Reporter.*

SOUTH WILTS.

On June 26th, a meeting of the South Wilts Chamber of Agriculture was held at the Bath Arms Hotel, Warminster, to discuss the provisions of the Valuation of Property Bill, and the subject of Highway Legislation. In the unavoidable absence of the President, Mr. H. D. Symour, on account of illness, the chair was taken by Mr. W. Stratton, of Deverill. Mr. Lywood moved, "That this Chamber approves Mr. Hubbard's amendment to Clause 31, that rateable and not gross value be taken as the basis of assessment for the income tax." Mr. T. K. Harding moved "That this Chamber approves of Mr. Clare Sewell Read's proposition for making actual rent the test of value. Carried unanimously, as was a resolution in support of an amendment introduced by Sir W. Bartellot, to the effect that half the salaries of the Clerks to Assessment Committees should be paid out of the imperial exchequer, and half from the common fund. It was also resolved—"That as the local rates are now heavily and unjustly burdened by having the expense of turnpike roads thrown upon them, this Chamber is of opinion that a contribution from imperial or other sources should be granted for keeping such turnpike roads in repair."

SWINDON.

ANNUAL MEETING.

The annual meeting of this Chamber was held at Swindon on May 25, Mr. J. Sadler, President, in the chair. The Report having been read and adopted, Mr. S. Colborne, vice-president for the past year, was elected President, and Mr. A. L. Goddard, M.P., vice-President for the ensuing year.

WORCESTERSHIRE.

VALUATION BILL.

At a meeting held on May the 26th, the following resolutions, relating to the Valuation Bill, were passed at a small meeting of this Chamber:—

1. "That, as actual value is not uniform, there could not be a uniform assessment if actual rental is taken in all cases as the gross value, and this meeting is of opinion that an approximate value fairly ascertained, so that lands of equal staple and quality may be equally assessed, is a more equitable principle than taking the rental that an individual may happen to pay as the gross value."

2. "That this Chamber is of opinion that income-tax should be paid upon the rateable value, instead of upon the gross value, as heretofore."

3. "That special county boards be established, for the purpose of hearing appeals."

AN ILL-USED PROVERB—*The Theatre*, commenting on the proverb generally quoted as "It's an ill wind that blows nobody any good," says:—"In Heywood's Proverbs 1562, is this: 'It is an ill wind that blows no man to good.' Shakespeare uses it in *Henry VI.*, third part, act ii., scene 5: 'Ill blows the wind that profits nobody.'—a change of form made for the sake of the metre. In *Henry IV.*, part 2, act v., scene 3, Pistol says, 'Not the ill wind which blows none to good,' which is very nearly the popular form as given in Heywood."

At one of the goings-down of Atlantic steamers, a couple of years ago, an American lady and her two daughters honoured the ceremony with their presence. The mother was drowned, the daughters were saved. The younger one recounts the event by stating that "Mother and we did the splash together: sister and I bubbled up again; mother did not."—*World.*

THE CATTLE PLAGUE COMMITTEE.

HOUSE OF COMMONS, MONDAY, JUNE 4.

The Select Committee of the House of Commons to-day resumed its sittings on "Cattle Plague and Live Importation," after the adjournment of Parliament over the Whitsun and Derby weeks. There were present:—Sir H. Selwin-Ibbetson, Chairman, Mr. W. E. Forster, Colonel Kingscote, Sir Rainald Knightley, Mr. Torr, Mr. Corry, Mr. Elliot, Mr. McLagan, Mr. Jacob Bright, Mr. Chamberlain, Mr. H. Chaplin, Mr. Arthur Peel, Mr. Richard, Mr. Anderson, &c.

The first witness examined was Prof. Müller, member of the Berlin College of Anatomy. After giving some details of the veterinary staff of Germany for the suppression of disease, in answer to the Chairman he went on to say that Russian cattle are prohibited entering into Germany since 1873, and all grey Steppe cattle from Austria since the year before. Hungarian cattle are not admitted into the country. A zone of some distance surrounds the frontiers of Germany between it and Russia and Russian Poland through which no cattle are permitted to pass, nor are the home cattle bred within this zone to be trucked on railways except at certain specified places by special licence. A census and registration of cattle is periodically made within this zone, and the inspectors have to account for the presence of any increase in numbers, and are punished if foreign cattle are found to have been allowed to enter it. The most dangerous part is the boundary between Poland and Silesia. Plague from Russia is to be particularly feared now, as all experience proves that plague follows the movements of Russian armies. Russian or Polish cattle can only enter by smuggling—a system which unfortunately is but too common. The last outbreak was due to smuggling cattle from Poland into Upper Silesia. The Imperial Government gives full compensation—the ordinary market value, not the fancy breeding value—for all animals that have either died from rinderpest or have been slaughtered with a view to stamp out the disease. The cost of slaughter and disinfection is also paid for out of Imperial funds. A law has been passed enabling Government on the first intimation of an outbreak on the frontiers, or elsewhere, to control immediately within one day of the receipt of such information all large markets—Breslau, Berlin, Dresden, Hamburg, &c.,—by compelling the slaughter of all stock disposed in the markets, not allowing any to be removed alive into the country. Pleuro-pneumonia is present constantly in some provinces, as in Saxony; in others it seldom appears. Slaughter of the diseased and isolation of those in contact is enjoined. Compensation in some parts of the empire is one-half, in others four-fifths, paid out of the rates of the particular State. The prevalence of pleuro-pneumonia in Saxony is accounted for by the large number of cattle bought, fed, and sold every year in the neighbourhood of the extensive sugar factories there. He said he did not believe in the efficacy of inoculation as a preventive, but he must say very high authorities were strongly in its favour. He had great hopes they would be able to stamp out the disease. As to foot-and-mouth disease, he said that although it was possible to exterminate it, the severe measures necessary to do so would be worse than the disorder. Besides, it would soon appear again, as it was continually imported from Poland, through the agency of the pig trade. Professor Müller then put in a table, showing how rapidly glanders had diminished in the country, since they had adopted their present regulations for slaughter and compensation. He wished, he said, to correct a few remarks made by Professor Brown in his evidence, particularly with regard to Professor Brown's statement that with a dead meat trade between Germany and Great Britain diseased meat would be likely to import plague into this country. Now, as they paid compensation in full for the meat from plague-stricken animals at home, it was not likely they would attempt to send diseased bad meat into this country, where it would run the risk of being seized, or sold at a low price.

In reply to Mr. Forster, Professor Müller said that plague was now present in Poland, and doubtless in Roumania; also

in Hungary, although that country is reported free. When plague breaks out in Germany they have power to slaughter healthy animals on adjoining premises when thought expedient. The loss and alarm occasioned by the last outbreak had resulted in increased vigilance, but he had no doubt cattle plague would cross the frontiers again. He believed it necessary for our protection that we should slaughter all German cattle at Deptford, or in Ilington market, if the market was closed against export therefrom.

In answer to Mr. Bright the Professor said Germany should be a scheduled country, and not subjected to total prohibition of cattle. Further in his examination, in reply to other members of the Committee, he stated that he did not think that Germany would send us more cattle if unscheduled than when scheduled. He did not think that men were common vehicles of infection. Dogs and sheep were more likely to carry it in their hair or wool. All dogs near infected premises in Germany were shut up; if found at large they were shot. The inspectors would be punished if an extra beast was found within the zone he described. All contagious diseases of animals, such as rinderpest, pleuro-pneumonia, sheep pox, foot-and-mouth disease, &c., were propagated by contagion alone. He did not think a dead meat trade with England from Germany would pay; all attempts of the kind from Russia and other prohibited places to Germany had not proved successful. He could not deny that it was possible to exterminate foot-and-mouth disease in this country. But it would require a great change in our system, and he thought Englishmen would not stand even the severe measures Germans had to submit to sometimes. There were, he said, a great many dairies in some of their large towns, in others few. Town dairies were hotbeds of disease, such as pleuro-pneumonia. Meat from plague-infected animals might convey disease to other animals, but no injury had been known to occur to human beings from consuming it. There was great smuggling of cattle across the frontier from Siberia. England must greatly rely on protection from plague on the efficacy of Prussian regulations.

Mr. Thomas Swan, of the firm of Messrs. Swan and Sons, stock salesmen, of Edinburgh, was next examined. His evidence was principally to the effect that he believed the trade in dead meat with America would diminish. It did not pay. The cost of transit of a live beast from America cost £3 more than of a carcass, but the profit of a live beast from the better price obtained for it, and the facility with which it could be moved about and held over for a change of markets, was £3 in its favour. His firm had not dealt in dead meat since 1866. He had no practical experience of the dead-meat trade only what he saw and heard. His firm sold nothing but live stock. The fluctuation of the markets, and the sudden change of price felt even in the sale of different portions of a single cargo of dead meat, made the trade a very precarious one. England could not rely on American meat. It was getting out of favour in Scotland. On being repeatedly asked by honourable members whether he did not admit that the trade in American meat was steadily increasing, he as repeatedly acknowledged it was; still he thought that the supply would gradually get less. In reply to the member for Glasgow, Mr. Anderson, Mr. Swan said that no doubt cattle plague was imported, but pleuro-pneumonia could be generated in the country. Foot-and-mouth disease may arise of itself, at any time in any place. It was not an imported disease, although he had seen it come on animals from abroad. He thought it was "atmospheric."

WEDNESDAY, JUNE 6.

The Committee met again to-day, Sir H. Selwin-Ibbetson in the chair. There were present also:—Mr. Assheton, Mr. Elliot, Mr. W. E. Forster, Mr. Norwood, Mr. Corry, Mr. Torr, Mr. Murphy, Sir Rainald Knightley, Mr. Peel, Col. Kingscote, Mr. Chaplin, Mr. Anderson, Mr. Chamberlain, Mr. McLagan, Mr. Pease, &c.

Mr. Mark Whitwell, managing owner of steamers trading between Bristol and New York, was first examined. He stated that some five consignments of dead meat had been imported from America in their steamers, commencing in April this year

The first consignment was excellent. There were not in such good condition, but they were not bad. There was no reason why all should not be as good as the first. The slight failings that occasionally occur can all be easily obviated by greater care and skill. In one instance the supply of ice was short; in another too much meat was packed into the cold chamber. He had nothing to do with the importation or sale of this meat; the shippers simply obtained permission to fit chambers in the steamer at their own expense. He thought the trade would increase. There was no prejudice against American meat in Bristol; the same purchasers came again. Beef sold by the side wholesale fetched from 5½d. to 6½d. per pound. He had been told it must sell at that price to yield a profit. The price in the ship was set at 30s. per ton of forty cubic feet. The freight averaged 1d. per pound, which did not include the cost of ice and an engine to look after the meat on the voyage. A ship could not carry meat alone on this system; she would have to obtain some other cargo, or she would not be "trim." About one-tenth part of a ship can be used to carry meat. He was of opinion dead meat could be sent during the hottest weather. The waste of ice would not be more, as the chambers were closed. Dead meat so brought would travel twelve or fourteen hours by rail without damage. They sent some to London in this way, and it did not deteriorate on the journey. To be very candid, the inferior lots were forwarded to the metropolis for sale. If the meat arrives in good condition its price does not fluctuate much—perhaps ½d. per lb., according to the state of the market. When it is sold at 3d. per lb. it must be because it has not been brought in good condition.

Mr. May, the Netherlands Consul General, was then called. After giving some particulars of recent legislation in the Netherlands for the suppression of contagious cattle diseases, he said that the decree of December, 1870, prohibited the importation of cattle and sheep, hay, straw, manufactured hair, &c., &c. They now allow the transit of sheep through to Great Britain. Pleuro-pneumonia was formerly dealt with by isolation, inoculation, and treatment, but now generally by slaughter of the diseased and those suspected to be diseased. By the latter means pleuro-pneumonia was now practically extinct in Friesland. Inoculation, it is believed, hastens the crisis in diseased animals, and protects the healthy. The disease has greatly diminished, only 100 cases being reported in the country in the four weeks ending 19th May. They have strong hopes that the measures now in force will stamp it out. Their veterinarians differing from those in this country, believed pleuro-pneumonia was propagated by mediate contagion. Foot-and-mouth disease was not recognised by law, but recommendations were made as to dealing with an outbreak which were generally observed. They did not, he said, now import cattle from any Continental country whatever. All live stock were inspected at the port of export, and no animals suffering from foot-and-mouth disease were allowed to leave in the ships. He thought if we prohibited the importation of live stock it would discourage breeding in the Netherlands.

M. Thomson, a large breeder and grazier in Schleswig-Holstein, was next examined through an interpreter. He tendered himself as a witness chiefly, he said, to advise the Committee to allow free importation of the stock of his country into Great Britain. They could not adopt the dead meat trade. Stock were exported in about 2,500 ships; these ships could not all be adapted to dead meat traffic, but he admitted large companies might be formed to carry on the trade. If we prohibited their live stock from landing, the trade in them would be diverted elsewhere, or they would have to revert to dairying as the chief agricultural industry, instead of rearing and feeding as now. If we scheduled the country and had all the cattle slaughtered at Deptford, instead of being allowed to go to Islington market, they could not compete with some other countries, such as Denmark, for instance. The loss on killing at Deptford instead of selling at Islington was from £3 to £3 15s. per head on cattle, and 5s. on sheep.

Mr. T. C. Booth, Warley, Yorkshire, as a witness representing the Council of the Royal Agricultural Society of England, was next called. Mr. Booth said he farmed land his own property, and also rented land from other parties. He kept a herd of valuable high-class shorthorns, and had also other sorts of cattle, which he bought and fed. He said he suffered severely from foot-and-mouth disease between 1869 and 1872, so much as to reduce his herd by one-half. There had been great expense and inconvenience in consequence of the restrictions

made necessary by the outbreak of plague, but they gladly bore the cost to protect their stock from rinderpest. We cannot now, he said, send high-bred stock abroad; the market had been stopped everywhere in consequence of plague in this country. For some time previously imports to Australia had been stopped because of the prevalence of foot-and-mouth disease in Great Britain. There were commissions from Australia to the extent of £100,000 for the purchase of pure-bred shorthorns at the present moment, but they could not be executed. Even Ireland and Japan would not receive our cattle. Farmers did not fear the importation of dead meat, only imported disease. Abortion in high-bred cattle was frequent after an attack of foot-and-mouth disease. As a result of the disease, one of his herds, numbering seventeen cows, only produced a single live calf in one year. When it was admitted that nearly 1,500 calves infected with foot-and-mouth disease were landed in this country in three years it could not be doubted that several other infected cargoes escaped detection, and Professor Brown's evidence admitted so much. The cost and inconvenience of restrictions necessary to exterminate foot-and-mouth disease were much to be preferred to the disease itself. Farmers would submit to severe measures if they were protected from the re-importation of disease from abroad. He could afford to sell meat cheaper if there was no risk from disease. Foot-and-mouth disease was not generally a fatal malady, but when he suffered so severely years ago he lost five or six of his most valuable animals. That he had suffered a loss of from £3,000 to £40,000 in this disease would be a very moderate estimate. He thought it quite possible to rid the country of the malady; and farmers would not grumble at either the cost of the process or its inconvenience to them. The opinions and feelings of farmers had greatly changed on the matter during the last six or seven years. The country had not been for years so free from foot-and-mouth disease as at the present moment. This was mainly to be accounted for from the present cattle plague regulations, the scheduling of other countries, total prohibition from some, and the stoppage of home movement of cattle over large areas. Professor Brown prophesied a great outbreak this spring, but he confessed that the recent regulations have checked what seemed to him at one time inevitable. The disease would not take long to stamp out if the country were divided into districts, under the supervision and control of the Veterinary Department, and wherever an outbreak occurred, adopting the cattle plague regulations as to preventing movement of cattle. He would give the Veterinary Department sole authority in infected districts. The local authorities and farmers would not complain. Professor Brown, he said, evidently misapprehended the feelings of farmers as to what they would submit to, if by any measures they could get rid of the disease, and prevent its re-introduction into the country.

HOUSE OF COMMONS, FRIDAY, JUNE 8.

The Committee met again to-day. There were present Sir H. Selwin-Ibbetson (Chairman), Mr. W. E. Forster, Sir Rainald Knightley, Mr. Arthur Peel, Colonel Kingscote, Mr. Elliot, Mr. Anderson, Mr. Ascheton, Mr. Chaplin, Mr. Jacob Bright, Mr. McLagan, Mr. Torr, Mr. Corry, Mr. Murphy, Mr. Pease, Mr. Norwood, &c.

Baron von Behr, a large landed proprietor and breeder of stock in Germany, was the first witness examined. He said he came to represent the opinion of German farmers. They looked with great anxiety at the proposal to prohibit live stock importation from their country. The plague had fully alarmed them in Germany. Stricter precautionary measures—some of which he explained—were proposed to keep it out. If English farmers made any suggestions to them, and asked them to do this or that thing for mutual protection, he was sure the German Government would agree to act upon them. For the purpose of ensuring confidence in the inspection at the German ports of export, he thought it would be a good thing if we stationed veterinary inspectors of our own there to watch proceedings, and be constantly on guard—not to act officially at the ports, but to use their moral influence in preventing the shipping of diseased animals, if such were likely to take place, and to give the country early information of a diseased cargo. Foot-and-mouth disease they did not care much about in Germany. It is seldom fatal. It comes, goes, and they think little of it.

Mr. Gillett, a large exporter of American meat, was then called. Mr. Gillett said he had been a breeder and fender of stock on a large farm in Ohio for thirty-one years. He com-

meat exporting meat last August at the rate of 100 carcasses a week, and worked up to 500. The cattle were killed in New York, and the carcasses hung up outside the chamber fire or six hours, and then removed into a refrigerating room, where the quarters hang for about 48 hours. They were then stitched in canvas and put on board the vessel. The trade was rapidly increasing. They only deal in best quality; the inferior will not suit our market. The supply of best quality will keep pace with the demand. Sold at 6½d. per lb. wholesale in London leaves a good profit; it can be sold in Liverpool for less. Meat cooled down to 40 degrees, and taken out of the ship's chambers on arrival here, will last sound much longer than fresh meat killed in the ordinary way in this country, with the animal heat left in. The inferior shipments have all been the result of accident or want of due care. The most important condition is that the meat must be properly prepared by cooling before it is put on board ship. Some cargoes also, that have not arrived in first-class condition, are the result of various experiments in attempting to improve the system, but which have failed. He said he did not think refrigerating store-rooms at all necessary on this side. American meat on arrival might be taken by train 300 miles, and would afterwards remain perfectly sweet in the retail shops for three days in warm weather. The supply of cattle in America is shorter than it has been for ten years. In consequence of sickness of trade last year fewer cattle were fed in the States, and a tension was turned to other stock, &c. Next year they would have from 80 to 40 per cent. more cattle. The supply is practically unlimited. He imported since August last, on an average, three cargoes per week, two of which were sold in Liverpool. There has been little change in the wholesale price here. It struck him they would keep going on, and in twenty years' time they would be able to supply the meat of 20,000 beasts the day we wanted it. He explained, during

his evidence, that in August last the first shipment he made was of beasts killed at New York when the thermometer registered 104 degrees in the shade, and it arrived here in perfect condition. The trade, he said, can be carried on in the hottest weather.

Mr. Hall, wholesale butcher, Liverpool, was next examined. This witness stated that American meat was a great boon to the lower classes. If it had not been for it meat would have been at famine prices—1s. to 1s. 3d. per lb. Nevertheless, American meat, though tender, was devoid of flavour, and when cold after being cooked, very insipid. It was getting out of favour in Liverpool, and he thought the trade could not increase. He had more faith in a live-stock trade with America. Importation of live stock from America paid well, notwithstanding that sometimes there were serious losses.

Mr. Link, provision agent of the Metropolitan Market, was next called. He received consignments of American meat on a large scale, but was not an importer. He said he entirely concurred in all Mr. Gillett had said respecting the prime condition of the meat, its great keeping quality, and the probable development of the trade. As a proof that the trade was thoroughly established, and the meat of prime quality, he instanced the immense quantities imported; the west end butchers, he said, were large purchasers of the meat, and the aristocracy were consuming it without knowing less than that they were eating the best Scotch beef. He admitted there had been several failures by some processes, but with all he had had consigned to him there had only been a few trifling losses. They supplied regularly two lines of steamers trading between Liverpool and New York with American meat for the consumption of crew and passengers on the outward journey, a proof of the good condition of the meat and of its excellent keeping quality.

SPELLING REFORM.

A conference on spelling reform was held on Tuesday May 29th, at the room of the Society of Arts in the Adelphi. The Rev. A. H. Sayer, M.A., Deputy Professor of Comparative Philology, Oxford University presided, and was surrounded by several of the most prominent promoters of the movement.

Mr. EDWARD JONES (the Hon. Secretary) explained that the primary object of the conference was to support the request emanating from the School Board for London for the appointment of a Royal Commission to inquire into the subject of English spelling, with a view to reforming and simplifying it. It was distinctly understood that the conveners would not be committed to any particular scheme of reformed spelling and that a simplification of spelling did not necessarily imply the adoption of new letters. The object was to obtain an official investigation of the question, and to discuss in its various relations a subject which has an important bearing upon general education, and respecting which some misapprehension exists in the public mind. The subject was taken up at a meeting of the Philological Society ten years ago. Since then the subject has gained attention in many quarters. The first public body that declared in favour of change was the National Union of Elementary Teachers, representing some 10,000 teachers in England and Wales. The motion was then carried unanimously. The London School Board took the important step of inviting the provincial school boards to join them in the application, and a hundred school boards responded. Several gentlemen had expressed their sympathy with the object of the meeting, including Robert Moffat, the veteran Missionary, the Rev. Prebendary Wood, Bath, Mr. E. O. Trevelyan, Dr. Ingley, Professor Yorke Powell, the Bishop of Exeter, who advocated the formation of a society who would pledge themselves, both in writing and in print, to spell phonetically, and so discard the present system, whose success would greatly depend on their making the minimum of change, and Mr. Lowe, M.P. At the commencement of the circular convening the conference was this sentence from a paper by Professor Max Müller in *The Fortnightly Review*—"Is there no statement in England sufficiently proof against ridicule to call the attention of Parliament to what is a growing national misfortune?" That sentence had probably caught the eye of Mr. Lowe, who had written as follows:—

"Sir,—I am not afraid of ridicule, and I have a strong opinion on the spelling question. I cannot be present at your meeting, but you are quite welcome to my opinion. There are, I am informed 39 sounds in the English language; there are 24 letters. I think that each letter should represent one sound, that 15 new letters should be added, so that there be a letter for every sound, and that every one should write as he speaks. I have been in the habit for many years of having boys to read to me. I always take them from the sixth standard. They are unable to read aloud tolerably, and have no idea of the pronunciation of the language. The only remedy for this, in my opinion, is to teach all the 39 sounds together with the letters which represent each of them."

The CHAIRMAN remarked that the present mode of spelling caused loss of time and loss of energy, and involved a series of conundrums and rebuses. English spelling had become what Carlyle called a sham, and the mind which fed on shams was apt to forget what truth meant. Even the worst of the systems of phonetic spelling proposed was infinitely superior to traditional spelling. Their business to-day was to draw the attention of the Government and the public generally to the extent of the evil, and to secure means for putting a stop to it by a reform of the mode of spelling.

Three topics were prepared for discussion. The first topic dealt with the question from the point of view of the teacher; the second dealt with etymology and spelling; while the third had reference to the means of introducing an amended system of spelling.

Mr. ISAAC PITMAN opened the discussion, and observed that nothing could afford him greater pleasure than the letter of Mr. Lowe. His fear had been there was not a man among the conventional 658 members of the House of Commons who would lead them to victory; but there was the man. He then proceeded to dilate on the loss of time caused by the present mode of spelling.

The Rev. Mr. WHITFORD argued that the missionary work of the word was hindered by the present system of spelling. The English language would become the universal medium if we had a right mode of spelling.

Sir C. READ said he had seen in the schools of the United

States what great advantages had resulted from a new mode of teaching.

The Rev. Dr. R. MORRIS, the Rev. ALFRED CLEARY, and Professor TITO PAGLIANDINI discussed the second topic, and Dr. J. H. GLADSTONE and Mr. ELLIS the third topic.

A meeting was held in the evening at which Dr. R. Morris presided.

Sir CHARLES RÆD moved the first resolution:

"That as the length of time now found necessary to teach children in Elementary Schools to read and write the English language with ease and correctness is attributable in a great measure to the difficulties of the present mode of spelling, it is advisable, for the promotion of education, that some change should be effected, in order to remedy the evil."

In supporting this resolution,

Sir CHARLES said time was money to every one, but especially to the poor man. It was most important to implant in the mind of the child the liking to read. Now that the act of 1870 was passed, supplemented by the act of last year, this became a question of national importance. They wanted a public inquiry, before which the evidence of witnesses from various other countries might be adduced, so that the elementary work of education might be thoroughly effected.

Mr. JONES seconded the resolution, which was put and carried unanimously.

Dr. ANGUS proposed the second resolution:

"That as much of the current spelling of English is at variance with both etymology and pronunciation, there is a further reason why a thorough revision should be effected." He gave many striking instances of the capriciousness of English spelling, and asked why we "deigned" to do one thing, and "disdained" to do another?

Dr. J. H. MURRAY, of Mill-hill School, seconded it, and it was carried.

Mr. A. J. ELLIS proposed the third resolution:

"That, as no change would be effectual unless the amended spelling were accepted by School Inspectors, Civil Service Examiners, and Public Departments, side by side by the present spelling, the assistance of the Government will be required."

Dr. GLADSTONE seconded it, and ridiculed the "historic" argument for the preservation of the present spelling by saying that the two buttons on the back of a coat are the representatives of the worn belt which all men once wore. But no one, he argued, would retain them for that reason if they were inconvenient.

Resolutions were also adopted on the motion of Mr. Sweet, Mr. I. Pitman, Mr. Washington Moon, and Mr. Butterfill, appointing Professor Max Muller, Mr. Sayce, Dr. Morris, Dr. Murray, Mr. Sweet, Mr. Ellis, Mr. Pitman, Mr. Moon, Mr. Arding, with power to add to their number, as a deputation authorised to seek an interview with the Education Department and present the other resolutions.

FARMING IN SCOTLAND.

There has lately been much controversy about the results of farming in the Lothians, based chiefly upon a paper which has been compiled, showing that, during the 32 years from 1843 to 1876, the changes of tenancies in East Lothian have been 246 in number, and that 96 tenants have become bankrupt out of a total of 413 tenants. The rise of rents, a succession of bad seasons, the injury done to crops by the over preservation of game, and the increased cost of labour have, it is said, altered very much for the worse the position of tenant farmers in this once model agricultural county, as well as elsewhere in Scotland. At a recent meeting of the West Lothian Agricultural Association, Mr. Allen read a paper on "The difficulties farmers have now to contend with." Going back 43 years, he showed that during this period the price of labour had increased 150 per cent. for male servant, and 100 per cent. for women. The work of the smith and carpenter for the farm has also risen to the extent of 100 per cent. The price of farm horses has advanced 200 per cent.; manure has become much more costly; and oilcakes has risen £2 per ton. While the cost of farming has thus increased, Mr. Allen also showed that the cultivation of cereals had not proved profitable, cereals all around being now sold at less money by 6s. 1½d. per qr. than they used to be 20 years ago; and as to cattle and sheep, any increase of value is more than counterbalanced by the larger price which must be paid for lean stock and the increased cost of food stuffs. This bill of complaint, however, did not pass unchallenged. One farmer reminded the meeting that potatoes had increased in value from £15 to £30 an acre, and there had been a corresponding increase in the price of turnips. Another agriculturist, Mr. Glendinning, had prepared from his book a comparison between returns of the crops on a farm of 180 imperial acres in 1845 and 1875, showing that while the price of wheat, barley, and oats had not risen, that of hay was higher by about £4 per acre, turnips £2 per acre, and pasture 10s. per acre, the produce of this farm being now worth £256 more than it would have fetched 30 years ago. The total cost of labour was now £300; 30 years ago it would have been, say, £195. Then there was an extra allowance for risk in horses of £5 a horse, or £20 on the four horses kept, the additional cost of management thus being £215, showing £41 more profit on this farm than 30 years ago. Mr. Glendinning said he had been a farmer for 50 years, but if any one offered him the old times back again, he would say, "I am very much obliged to you, but I prefer the present." He was earning 8 to 10 per cent. on his money, and he thought that was as good as being a landlord. Summing up the discussion, the chairman said he thought it had been shown that, notwithstanding the

talk of failures among farmers, farming was in quite a healthy position now as ever it was.

It is only fair to add that Mr. Glendinning enjoyed the happy and somewhat exceptional position in Scotland of being a tenant whose rent had not been raised during the period chosen for his comparison. Other statements which have reached us lately do not corroborate his rosy-coloured view of Scotch farming. Setting aside other drawbacks, the weather during the last twelve months has told much against them. The summer of 1876 was an unusually dry one. The drought caused a great scarcity of straw. Then came a very wet harvest, followed by a winter with no intense cold, indeed, but very prolonged. So that, along with a dearth of fodder and of stall food, there was also a great want of grass. In the north-eastern counties of Scotland, especially in Aberdeenshire and Banffshire, a large supply of fodder is very necessary, because the stock consists principally of cattle which have to be fed within doors for six or seven months of the year. The numerous and fine herds of that part of the country have, therefore, been undergoing great privations. For many years past there has been not so much need for an early bite of grass and, unfortunately, it has been looked for in vain. One correspondent says:—

"Within the memory of the present generation grass was never so backward as it was in the middle of May in Scotland. Hundreds of farmers have had neither fodder nor roots for their stock for two or three weeks back. Hay and straw have been imported at famine prices, and extraneous or concentrated feeding stuffs have necessarily been resorted to; but many farmers, especially the smaller holders, after such unfavourable seasons, cannot afford to procure those costly articles, and have thus been obliged to turn their herds upon the bare fields, where there is usually grass at this time of the year, while now there is only a pitiful picking, rendered all the more inadequate, until the last week, by bitterly cold weather, with snow frequently falling and lying on the ground, at least evening and morning. The result is that many cattle have died from sheer starvation and from eating frozen grass. Not for 50 or more years have there been such heavy losses in Scotch herds from starvation as have occurred during this spring, and high as the rate of mortality is from this cause, the losses from general deterioration of stock are even heavier. As to sheep stocks, there has been a great, though not unprecedented, death rate among lambs, nor have deaths been rare among old sheep. Ill-livestock are very bare, and the cold weather, together with short rations, has deprived the ewes of much of their milk, which means an in-

ferior yield of lambs. Sheep have fallen off greatly in condition since the middle of April. The deaths of cattle from positive starvation have been chiefly in the northern counties, Orkney having suffered much."

A correspondent has taken the trouble to send us much information gathered by him from several Scotch agriculturists, chiefly in East Lothian, whose first complaint seems to be of the Law of Hypothec. They do not explain why this law, after having been so long in existence, should on a sudden be made responsible for a period of losses and depression, which probably has its parallel just now in many districts on this side of the border. Hypothec is obnoxious to the tenants because, as they say, the landlord, being sure of his rent, is comparatively indifferent whether his tenant possesses adequate capital; and thus there is an unjust competition for the land, and higher rents are given than the land is really worth. A correspondent says:—

"It is well known that on the estates of one proprietor in East Lothian, Peeblesshire, and Perthshire there is no less than £20,000 of arrears of rent now due. On some farms one man after another has been ousted, and these men would not have got the farms had it not been for the operation of the Law of Hypothec. The old class of farmers who were in East Lothian when I came first into the county are rapidly becoming extinct, as they would not give the rents that were demanded, and a class of men have been brought in who have neither skill nor capital. A man with capital will bear up against some bad seasons, but, supposing he has only just enough money as to stock his farm, he goes to the wall generally after a bad season or two. The landlord has generally such a large claim as to clear out the tenant of everything, leaving but a small compensation to the other creditors. On the estates of the Duke of Buccleuch there are few failures, simply because he acts on the principle never to exact higher rents than the practical valuers he employs consider they are worth, and because he gives his farms only to men with sufficient capital to be able to cultivate them. The landlords who do not look at these things make sure only of getting high rents as long as the capital lasts, and that is one of the reasons of frequent changes. The Marquis of Tweeddale, like the Duke of Buccleuch, does not ask extravagantly high rents, and always takes care to ascertain whether a man who offers for a farm is possessed of capital. On the last rent day of the Tweeddale estates the factor said that there was only a sum of £50 of arrears of rent. That arose from the peculiarly cautious manner in which the marquis let his farms."

Another complaint made by the farmers of East Lothian is of the excessive quantity of game preserved. One farmer says:—

"No tenant would ever object to legitimate sport, but it is preserved, and little killed till October, when it is sent into the market and sold so that it is simply screwing another rent out of the tenant. The game is as regularly sent to the market as the farmer sends his grain. The eldest son of one laird in the county is said to get the produce of the game 'as pocket-money.'"

The increased expenses of farming of late years form another cause of the existing depression. A practical farmer told our correspondent:—

"On my own farm the expenses are at least 50 per cent. more than they were a few years ago. Some farmers say they are 100 per cent., but that is, perhaps, an over-estimate. My blacksmith's account 20 years ago came to about £10 or £13 in the half year now it is £20; my saddler's account was £10, now it is £18 or £20; my joiner's account is increased in the same proportion; and so on. Then the field worker's wages used to be 5s. a week, now they up to 8s. and 9s. a week, besides perquisites. We used to get the services of young persons for about 6d. a day; now we cannot get them at much less than the older people. Hinds' wages have risen 20 to 30 per cent. Ordinary ploughmen's wages, including meal, milk, &c., may be taken at from 16s. to 18s. a week. The farmers, however, do not wish to see the wages of their people lower than they are."

Another well-known agriculturist, formerly resident in East Lothian, says:—

"It is doubtful if there are three families in East Lothian occupying the same farm they did half a century ago. A change of tenant at the end of a lease is the rule and not the

exception, and a great many farms have recently been given up before the expiry of the lease. When a farm is now let it is taken, in the great majority of cases, by persons who come from other parts of the country. Of these new tenants the majority are persons who have made more or less money in other trades, or the sons of such persons."

This gentleman also points out that the Law of Hypothec places a man of capital at a disadvantage in offering for a farm for which reckless and ignorant "men of straw" also offer. "It is a fact well known," he adds, "that some of the largest landowners have let their farms to the highest bidder over the head of the old tenants who had improved the land, and that the new and largely increased rents have not been paid for any length of time, while in some equally well-known instances reductions had to be made before the first rent was due. The number of sequestrations is worthless as indicating the state of farming affairs, as landlords only resort to them when the case is utterly hopeless. The landlords do not like the exposure; it hurts the letting, not only of the individual farm, but of other farms. It is a generally expressed opinion among farmers that land in East Lothian is not so well farmed as a whole as it was, say 30 years ago. There is much misery and poverty among the Lothian farmers that is never heard of. It has been said that farmers failed in consequence of their ignorance and great extravagance, although every one knows that the farmers who have gone to the wall were always poor and lived poorly. The rich, who kept carriages, and hunters, &c., keep them still, having private means. It is not difficult to fix on the causes that have brought the farmers of arable land into their present position. Generally, it is because almost everything for which they have to pay has enormously increased in price, while much that they have to sell has fallen in price: 1. Rent has increased 25 to 30 per cent. during the last 25 years. 2. The price of labour has largely increased—that of women 100 per cent. 3. Guano has risen from, say, £3 per ton to £14. The arable farmer buys his horses, his cattle, and his sheep; he cannot breed them. 4. Horses have risen from £30 or £40 to £30 and £100. Lean cattle and sheep may be said to have risen to 80 per cent. 5. Tradesmen's accounts have mostly risen. 6. The price of grain which the farmer sells has greatly fallen. The only offsets are that hay is a little dearer, but only a few farmers sell it, and many are not allowed to sell it; cattle and sheep bring much more money when fat, but the rise in fat is not equal to the rise in lean cattle; potatoes are now a great and often profitable trade, but they are a most precarious crop, and also very expensive to raise. Freedom of cropping is most desirable."

Another practical farmer, who has lived upwards of 60 years in East Lothian, says:

"A great many farmers are wishing to give up their farms because they do not pay. I myself would be glad to give my landlord a large sum to be quit of my farm, but he will not listen to the proposal."

He also accounts for the bad state of things by high rents and increased expenses, and blames the Law of Hypothec, but for which, he says, many farmers would have got credit from the merchants and been able to carry on their farms, whereas the merchants know that if the farmers fail the landlord can sweep away the whole stock of the farm, and they themselves will have little chance of getting anything. This farmer also complains of the quantity of game. Besides increased expenses in other ways, the cost of labour on his farm has been more than doubled during the last 17 years. He fears that the importation of American beef must affect farmers before another year is over. He adds:

"I know the farmers of East Lothian very well, and I can say that a more frugal class of men does not exist. Some, no doubt, keep their carriages, but those who do so have plenty of capital. I believe that many of the farmers are getting a very small return on their capital, and the proportion of farmers who have lately been sequestrated is a much larger proportion than of those engaged in ordinary commercial business. I do not think that the farming of East Lothian is as good as it was 20 years ago, because the object of it now is to take as much as possible out of the land in order to meet the rents."

Lastly, some of our informants speak of less keen competition for farms than there used to be, and less eagerness for 19 years leases.—*The Times*.

MILK A SCAVENGER OF THE COW'S BODY—It is a fact which must have been noticed by all observing farmers and their families that medicinal agencies, taken into the stomachs of all milk-giving animals, reappear in the milk of such animals. No fact is more notorious than that any medicine—oath-rice, enema, or cathartic—given to a nursing mother affects the child in the same way it does the mother, the medication being carried through the milk of the mother to the stomach of the child in such large proportions as to make the effect upon the child as active as upon the mother. This inclination of the milk glands to carry off medicinal matter from the body of the milk-giving mother is not an isolated inclination to carry foreign matter from the system. Disease is carried as readily as medicine. Any and every disease which taints the blood, as small-pox, measles, typhoid fever, scrofula, or consumption, are transmitted through milk as readily as the effects of medicine. The excretory power of the milk-glands does not stop with carrying off medicine and disease—it extends to all foreign matter floating in the blood of the milk-producing animals. Nor is this power confined to the milk-glands. It belongs to the other glands as well. All the large glands of the body act as scavengers; but each has a function of its own, to which it is more especially adapted. The liver and kidneys are more active in carrying off foreign and waste mineral matters, while the central glands are more active in ejecting organic substances. These functions, however, run into each other. The oil of turpentine will appear in the secretions of the kidneys in fifteen minutes after being swallowed, and nitrate of potash will about as soon appear, to some extent, in milk as well as in urine. While the milk glands are not very different from other large glands in their general action, their functions have an interest above all others, in a sanitary and economical point of view, because of the part their secretions take in our food and commerce. The essential oil of plant which gives them distinctive flavour or odour, as of turnips, onions, &c., the putrid matter in rotten potatoes, decaying grass, and every other food in a state of decomposition, find their way out of the system through milk. I have been witnessing a striking instance of this from feeding the whey of a cheese factory to the cows furnishing milk for the factories. The whey in the factory was not different from that of other factories. It was one of six factories owned or controlled by one man, under whose personal supervision they were managed. The whey of all factories, as now managed, is stale before it leaves the factory; incipient decay is started in it, and the cows partaking of it carry the seeds of destruction into their milk, and thence into the cheese. In this instance only a part of the cows supplying milk to the factory used whey; but it was enough to infect the cheese. The curds acted badly and smelt badly; the cheese puffed and was off flavour, and quite unlike the cheese of the other five factories managed in just the same way, so far as manufacturing is concerned. The quality of cheese was depressed a dollar per 100. The depreciated value brought out a strong remonstrance against feeding whey to the cows, and it was stopped. The effect abated gradually, disappearing with the third day. The cheese of the fourth day became like those made in the other five factories controlled by the same superintendent, demonstrating beyond a doubt that the whey, though very slightly affected, carried into the bodies of the cows the seeds of putrefaction, which were cast again in their milk. So with all other fermenting, stale, or decayed food. It is sure to make its impress upon the milk of the cow using it, making it objectionable and unsafe to feed milch cows with any food, or to give them any water which contains anything that would not be proper to be taken into the human stomach.—*Farmers' Advocate*.

BIRD MURDER.—The wanton destruction of song birds by men who regard them all as enemies has been in so some degree checked by the action of the law, but the proper check to such cruel and injurious folly must be found in the diffusion of knowledge and the promotion of gentleness, for ignorance and hardness of heart underlie the passion for popping at anything feathered that appears in field or garden. On what, we may ask, have the robin and thrushes and blackbirds been subsisting since October last? For the most part on snails, slugs, insect larvae, earth-worms, and berries. The robin that follows the gardener's spade, and the rook that follows the plough are intent on breakfast, dinner, or supper, or a mere snack between whiles, and the grubs of the cockchafer, the

tipula, and of butterflies, moths, and beetles innumerable, constitute the daily fare of these birds, and compel them to be industrious and on the alert for ever and ever. That we date the consideration from October is in order to make a clear plea so far on behalf of a few of our particular friends, but we cannot of course ignore the fact that blackbirds and thrushes, are foremost amongst the frugivorous birds, and give themselves up to a life of luxury in the fruit garden from the time when fruit becomes palatable until the last berry is gathered. Now there are many birds, as the warblers for example, that scarcely touch grain or fruit, but subsist on insects exclusively. Of the utility of these there can be no question, and hence our interest as eaters of bread is intimately bound up with their preservation. But the loud voiced songsters that are partial to fruit are not to be hastily condemned because during three months in the year they make a slight charge for the useful labour they pursue through the remaining nine. Those who repudiate sentiment may be invited to a business view of the matter. If they were to employ boys to hunt for snails and slugs they would soon discover that the blackbirds and thrushes do the work more effectually and immensely cheaper, and to come to the plain truth of the matter, the bird generally leaves the owner of a tree a fair share of its fruit, or he at least can generally adopt better measures for its preservation than the destruction of these persistent foes of the smaller and most insidious marauders. When we take a wider view of the subject the policy of preservation is strengthened. The smaller song birds subsist almost exclusively on insects; the flycatchers and the swallows devote all their energies to rid us of obnoxious pests; the tits are incessantly searching the walls and the bark of trees for eggs and pupae; and among the larger birds we find destroyers of stoats, rats, mice, and rabbits, the four most injurious quadrupeds of the British fauna. Of a very large proportion of all known birds large and small—croakers, squeakers, and songsters—it must be said that they do at times prey upon man's wealth directly—they take grain, and fruit, and herbage; but, they view matter broadly, it cannot be questioned that they make as return in their destruction of smaller enemies, and the price they exact is but little compared with the services they render. In the general view of the case, therefore, it may be said that all birds should be protected, and that the sportsman and the fowler are, by virtue of their pursuits and occupations, the enemies not only of birds but of mankind. But a general truth is subject to exceptions, and many kinds of birds may be shot or snared with apparent advantage to all parties, more especially when they are such as the cook can convert into savoury sustenance. We have a certain amount of knowledge to guide us, and the acts under which birds are protected are founded on this knowledge. But we have only to look about us and it soon becomes evident that bird murder prevails to an injurious extent, and the proper produce of the country is directly lessened by the gun, the net, and the snare, and this not less on the rocky coast and the upland pasture than in the orchard and the garden.—*The Gardener's Magazine*.

POTATO GROWTH.—Those who were fortunate enough to have had their potatoes secure beneath the soil during the recent sharp frosts are now well repaid for having planted late, as the growth is coming through the surface in robust form, and if no more frosts assail us we may well look for a fine healthy growth. Although there is no relative connection between the effects of the spring frosts upon the potato haulm and the disease, it is morally certain that the haulm that has been out is much less capable of resisting its deadly effects, and it not unfrequently happens that the rot engendered in the young haulm by frost forms a sort of disease in itself, and materially affects the crop. If the regular late spring frosts that now visit us every season do not warn growers to be wise in time, nothing will. It is positively useless to attempt to forestall the seasons unless it is in our power to afford protection, and this can only be done with small quantities. Late spring frosts are awkward comments upon the wisdom of those who, as regular as the disease appears, exclaim "Ah, the best remedy is found in early planting!" What nonsense are such platitudes as these! Early planting in nine seasons out of ten leads to a frosted crop, the growth retarded for a fortnight, and the haulm in many cases either absolutely destroyed or so injured as to be of little further value.—*The Gardener's Magazine*.

THE CATTLE PLAGUE COMMITTEE.

HOUSE OF COMMONS.

MONDAY, JUNE 11.

The Select Committee on Cattle Plague and Live Stock Importation resumed their investigation this day—Sir H. Selwin-Ibbetson in the chair. There was a fair attendance of members, among whom were Sir Rainsald Knightley, Colonel Kingcoote, Mr. Asheton, Mr. Henry Chaplin, Mr. Arthur Peel, Mr. Chamberlain, Mr. Jacob Bright, Mr. McLagan, Mr. Torr, Mr. Norwood, Mr. John Holmes, Mr. W. E. Forster, Mr. Elliot, Mr. Pease, &c.

Mr. Lyons, master of the London Butchers' Company, was the first witness called. In reply to the Chairman he said he had been connected with the butchers' trade for twenty-five years. There had been no diminution in the supply of foreign cattle since Deptford Market had been established. The supply of American meat in tons in the Metropolitan Market for the first twenty weeks this year had been 264, 339, 112, 169, 133, 238, 215, 124, 183, 115, 197, 286, 276, 406, 330, 495, 417, 436, 611, and 709 tons respectively. The larger consignments were principally due to an increased quantity of inferior meat sent up from the provinces, where it was unsaleable. American meat was the greatest boon to butchers and consumers. The flesh of Continental beasts was not so good; it was thinner and poorer. It must be sold fresh killed with the bloom on it, for it deteriorates in appearance day by day by keeping, and gradually shrinks and gets unsaleable. A dead-meat trade with the Continent he thought could not be profitably conducted. He had killed thousands of foreign cattle, and had never detected pleuro pneumonia in any except in a few Dutch beasts occasionally. The disease was very common in this country during the last three or four years. He thought it acclimatised, and impossible of eradication again. He would have quarantine for diseased foreign store stock. He knew of cargoes of cows recently seized and going to calves that had to be slaughtered at Deptford, and sold for what they would fetch as dead meat, namely, about 29 a piece, their real value as milch cows being between £16 and £33 per head. Best American meat fetched a high price. Taken altogether, what has come to London has not averaged 6½d. wt. oleale, but it must be admitted the principal drawback resulted from the residue of meat unsaleable in the provinces.

In reply to Mr. Chaplin, he said that, taken altogether, there must have been considerable loss on the sale of American meat in London. He knew of tons sold at 1d. per lb. wholesale. About a week ago 12 tons were seized as unfit for food; as much as 6 tons in one day. Live bullocks from the Continent were worth 8d. per lb. as they stood.

In reply to Mr. Arthur Peel, he said most of the failures he believed were due to over packing. It was seldom the meat was unfit for food. The inferior kinds he spoke of were mildewed on the outside. After being trimmed, the body of the meat was perfectly healthy food. The American cattle were of excellent quality; those from the Continent were unsalable animals, having more bones than meat.

Questioned by Col. Kingcoote, Mr. Lyons said that the meat of beasts from the Continent, if brought over dead, would not fetch 6½d. per lb.; it gets of less value every day by keeping.

In reply to Mr. Norwood, the witness said that almost all butchers sell American meat. You can always have it from them if you ask for it, and you are very likely to be served with it if you don't.

He further stated in evidence that he had heard of American meat being sent to Glasgow and forwarded thence to London, and sold as best Scotch beef. He had seen it placed in the market in the very hottest weather last year in splendid condition. There was not such a large supply of dead meat from Scotland now as twenty years ago. The offer of a bullock worth £30 per carcass was worth about 15s. or 16s.

In his re-examination by the Chairman, he stated that in the first week of the present month large quantities of American meat were sold wholesale at 1s. 8. per st. Much

of it was sold in costermongers' barrows, after being trimmed, at 4d. per lb. for best joints. Had we not had American meat, butchers' meat would now be at a very high price. He believed best American meat just as good as English.

Mr. George Eas was then called. He said he farmed about 4,000 acres of arable land, 1,000 old feeding pastures, and from 70,000 to 80,000 acres of sheep land. His farms were situated in Northumberland, Lancashire, and Scotland. His evidence was to the effect that the fear of cattle plague operated unfavourably on the British farmer, who bred less in consequence than he would otherwise do. Had it not been for cattle plague this year he would have bought a great many more cattle than he had. Speaking of foot-and-mouth disease, he stated that four or five years ago he suffered great loss from the malady. Fifty forward cattle in October, intended to be sold fat at Christmas, were attacked, and were thrown back in condition so that they did not come out till the following February and March, the loss to him being about £3 per head. The high price of meat now, he thought, was greatly due to the cattle plague of 1835 and 1836. Meat was 6d. to 6½d. before that time; it was now 8d. to 8½d. He was thoroughly convinced, he said, that farmers would willingly submit to any restrictions necessary for the extinction of foreign cattle disease. He believed that the entire prohibition of live stock from the Continent would lower the price of meat and benefit consumers generally.

WEDNESDAY, JUNE 13.

The Committee met again to-day—Sir H. Selwin-Ibbetson in the chair. There were also present—Col. Kingcoote, Mr. Arthur Peel, Mr. John Holmes, Mr. W. E. Forster, Mr. Norwood, Mr. Torr, Mr. McLagan, Mr. Jacob Bright, Mr. Chamberlain, Mr. Elliot, Mr. King-Harman, Mr. Asheton, Mr. Murphy, Mr. French, &c.

Mr. S. Lambert, cattle-salesman, Manchester, was the first witness called. He said he had watched the dead-meat trade with America, but had no practical acquaintance with it. During the cold weather the meat arrived in good condition. The quality of some consignments was very mixed, containing carcasses of bulls, old cows, &c. At one time there were eighteen depots opened in Manchester for the sale of American meat. The trade in it, however, had fallen off considerably—the people had ceased to ask for it, and the majority of the shops were now closed. In cold weather the meat was of very good quality, although complaints were made that when it was cold, after being cooked, it was insipid, but he had never tasted any himself. He did not think the trade could be kept up unless the meat was sold within two days after its arrival. The trade in foreign sheep had been very large in Manchester; but since the cattle plague regulations had been enforced, sheep from Germany were slaughtered at the port of landing, and thus sheep had to be supplied from other sources, such as the London markets. The Lancashire operatives liked small joints of mutton, such as were obtained from foreign sheep, and the dealers depended on these animals for their supply. In the Salford market particularly they depended more every year on the supply of foreign sheep. The consumption of mutton had fallen off considerably, for prices had increased in consequence of the restrictions imposed on the trade. Any measures that would put a stop to contagious cattle diseases would be a great boon. He was a member of the Royal College of Veterinary Surgeons, but did not practice. He thought foot-and-mouth disease had become indigenous to the country; it sometimes breaks out spontaneously, he said, especially in hot weather. Pleuropneumonia was a very fatal disease, and caused serious losses; but he did not care much for foot-and-mouth, and it would not be worth while to take the measures necessary to stamp out the latter disease. There was nothing so very surprising, he thought, in the importation of fresh American meat; Professor Gamgee foretold the possibility of bringing it four or five years ago.

Mr. Archibald Hamilton was then called. He said he represented the opinion of the Glasgow Associated Society of

Fishers. He dealt largely in American meat, which arrives in very good condition, even in the very hottest weather. It will keep just as long as our own fresh-killed meat, although it loses more in colour. Two lines of Glasgow steamers traded in it. One line brought the meat in better condition than the other—they adopted different fittings, &c. Customers do not complain of the quality of American meat; it was just as good as our home meat. It was invariably of the best quality. It would keep a fortnight in cold weather, and a week in hot. American meat, he said, would cure well, for he had cured a great deal of it himself. None of the consignments that arrived in Glasgow, or any portion of them, had been condemned as unfit for human food. The profits in dealing with it paid well, taking good days, when the market is glutted, along with the bad. It sold 1d. per lb. cheaper than our own meat of the same quality. The difference was made simply because it was American, and not English. No beef in the world, he added, amidst loud laughter, was as good as the Scotch.

Mr. J. P. Sheldon, The Sheen, Ashbourne, Staffordshire, was the next witness. He said he had been recently engaged in an investigation into the American dead meat trade, for the purpose of reporting on it in the *Journal of the Royal Agricultural Society*. After handing in statistics, referring to the supply of American meat, he stated that, provided America consumed 100 lbs. of meat per head of the population annually, as was the computed rate of consumption in England, she had enough cattle afterwards to spare us from which she could supply the whole of Great Britain with animal food. A beast weighing 912 lbs. nett can be raised in Ontario or in the States, and delivered at the Atlantic sea-board at about £16. By the time the carcass of such a beast reached Liverpool in the cold or dried air system the total cost would be about £18 10s. The same kind of animal if transported alive would have cost in raising, carriage, &c., about £24. The profit on the dead meat was considerable. The witness said he had seen the meat-chambers opened on the arrival of steamers at Liverpool. The meat was in perfect condition, and the chambers were as free from offensive odour, and as sweet as any butcher's shop containing fresh-killed meat. He had partaken of American meat himself. It is excellent so far as quality and flavour are concerned; its keeping properties are good, and its cooking properties equal to the average of English killed meat. The trade, he thought, was destined to increase to a very large extent. At the present prices obtained for it here America will continue to send dead meat over very freely. Neither hot nor cold weather will make any difference. All losses by the meat arriving in a bad condition were entirely due to accident, the failing of ice, or some fresh experiment in the system of meat preservation being tried. The trade in dead meat with America will become an established branch of commerce. He thought the importation of foreign live stock should be prohibited. We could very easily establish a dead-meat trade with the Continent. It certainly is cheaper to import an animal dead than alive. That a trade in dead meat had not been established between us and the Continent was, he thought, due to the force of custom; if it were commenced we should, in the course of a few years, wonder we had not tried it before. A ship can carry a great deal more meat dead than alive. If we totally prohibited live stock importation, meat would eventually cheapen, as a result of freedom from disease in this country. With regard to the suppression of foreign contagious diseases, the witness said that farmers would submit to almost any amount of inconvenience for a time if they were assured that no further importation of infected foreign cattle would be allowed, and that the diseases would be effectually stamped out in this country.

FRIDAY, JUNE 15.

The Committee again met on Friday, Sir H. Selwin-Ibbetson in the chair. Also present were Colonel Kingscote, Sir Rainald Knightley, Mr. Arthur Pell, Mr. Elliott, Mr. Corry, Mr. Torr, Mr. McLagan, Mr. Norwood, Mr. Chamberlain, Mr. French, Mr. King-Harman, Mr. Murphy, Mr. Awhetson, Mr. Jacob Bright, Sir George Jenkinson, Mr. W. E. Forster, Colonel Morgan, &c.

Mr. Jacob Wilson, Woodham Manor, Morpeth, Northumberland, was the first witness called. He was examined by the Chairman, when he stated that he was a tenant farmer and land-agent. He was deputed to represent the Council of the

Royal Agricultural Society. He said he was the mover of the resolution at the meeting of the Society which induced the Privy Council to grant this Committee. The resolution recommended total prohibition because slaughter at the port of landing was inefficient, as proved by the cargo of "Castor." Considering the large number of cargoes detected each year as being infected with foot-and-mouth, doubtless, he said, numbers escaped without being observed. He thought the Council would adhere to the resolution, notwithstanding the additional precautions promised by Germany, as Professor Müller himself admitted that even then there would always be a risk of plague crossing into Germany over the Russian boundary. Even with the German promise of giving earlier telegraphic information to this country of any outbreak, and the closing of their fairs as suggested, we should not be safe. Mr. Wilson said he would totally prohibit cattle importation from all countries where disease exists, and from any country that imported cattle from infected countries. From all other countries he would recommend slaughter at the port of debarkation. All countries should be scheduled, and total prohibition of their stock should follow whenever they relaxed their restrictions. He would not make the same regulations as to sheep, as they were not likely to bring plague—he at least would not insist on it as regards sheep. The resolution of the Society had in view the fact that everything pointed to a dead-meat supply as the future great source of food. He thought the trade destined to increase. As to losses from cattle plague, Professor Brown stated that the direct loss in 1865-6 was £5,000,000. Calculating indirect loss it must have been twice as much. The breeding capability of the country suffered even now after the great losses by plague at that time. The consequence was that meat was dearer now than before the plague as between 5½d. and 6½d. per lb. The number of our stock had decreased since by 1,000,000. We were never so free from foot-and-mouth disease as in 1865 and 1866, and this was in consequence of cattle-plague regulations. He never knew the disease so prevalent as in 1869, 1871, and 1873. The Government at the time got so frightened by its prevalence that they gave up collecting statistics. (Laughter.) He believed that want of uniformity of action by local authorities was a great evil, as he showed by referring to certain circumstances that had come under his notice in Northumberland. He thought the central authority should have sole control of dealing with contagious diseases, and supersede the local authorities. Unless certain restrictions are laid on the importation of cattle into this country it will be utterly futile to attempt to stamp out disease. If this was done, then the country would be perfectly prepared to agree to Professor Brown's scheme of dividing the country into districts and stopping the movement, except by licence in either of those in which disease appeared. The areas might be much smaller than the counties. Farmers would submit to such restrictions as preferable to the present harassing and unsatisfactory system, especially if the regulations were conducted by the central authority and the Government of the country. He should deal with Ireland as a part of England. Mr. Wilson stated that his father practically lost two herds of Shorthorns by pleuro-pneumonia, one some time before 1845 and the other in 1852. The cattle that suffered in one outbreak from pleuro-pneumonia had suffered severely before by foot-and-mouth disease. Foot-and-mouth disease occasions serious loss among cows from abortion, loss of produce, &c. In face of these diseases, ever since the cattle plague of 1865, many persons have abandoned breeding because of its risks, and purchase cattle at fairs. A great deal can be done in suppressing pleuro-pneumonia where persons are qualified to diagnose the early symptoms. Nothing less in any case than full compensation should be given for diseased animals slaughtered by order. He should like compensation to be considered as imperial question, for the supply of food for the country is imperial rather than local. He should like to see ships especially fitted for carrying cattle under regular inspection, and bound to carry no more than a certain number. Town cowsheds are hot-beds of infection. They should be regularly inspected under the central authority, but it would be better to do away with them altogether. Milk can come from the country almost any distance if properly cooled down to take the animal heat out, as in the case of dead meat. There would be no difficulty in supplying a large city like London with milk entirely from the country. Seventy-five per cent. of the cattle that die in the town of Newcastle die from

pleuro-pneumonia. He had seen and tasted American meat. It is in excellent condition and of good flavour. He thought it would keep better than our own killed meat, for it is thoroughly cooled down. He considered the meat a great boon, and hoped it would teach our butchers some of the elements of science. No class of people have been so slow to learn as butchers, who have not yet in England learnt the use of refrigeration. He wished to state that those who said American meat will not keep, are giving an English opinion from an English point of view.

Mr. Wilson was then re-examined by several members of the Committee, to whom he further explained and supported the views advanced by him in his examination-in-chief.

Amongst other statements made by him, he said, in reply to Mr. Asheton, that the direct loss by foot-and-mouth disease on a fattening beast worth £25 would be about £5, not calculating loss of time in having to fetch him up into the same condition again.

In reply to Mr. King-Harman, he said he thought every class of society did better when cattle could be bought cheap. Farmers did much better when store cattle were cheap.

In answer to Mr. Chamberlain, he said sheep might be allowed to come into the country from countries practically free from disease, like Denmark, but he thought total prohibition the safer plan. He did not admit foot-and-mouth disease and pleuro-pneumonia were generated spontaneously. He said he would even submit to an internal dead-meat trade if it was necessary to prevent the spread of the disease.

Mr. Wilson further remarked, in reply to other members of the Committee, that the statement that the supply of ice would fail if we had a dead-meat trade with the Continent was a difficulty greatly exaggerated. Ice could be produced artificially. He would make no distinction whatever between foreign fat cattle and foreign stores; we can, he said, do very well without the stores. The complaint of restrictions for the suppression of disease was, he affirmed, made by small cattle dealers and middle-men, and not as a rule by producers or consumers.

Mr. Hermann Gebhardt, foreign-cattle salesman, Deptford, was the next witness. He commented somewhat severely on the delay at Deptford in destroying the plague-stricken cargo of the "Castor." During his examination-in-chief by the Chairman, which was not completed when the Committee adjourned, he expressed his opinion that considering, as he believed, it was impossible to stamp out pleuro-pneumonia in this country, and that other countries, such as Germany, had promised they would take increased precautions in future to prevent the importation of plague, he thought our present regulations at the port of debarkation were sufficient to protect us. He did not believe that Continental countries would embark in the dead-meat trade. The prohibition of live stock would only drive the supply of meat into other directions.

MONDAY, JUNE 18.

The Select Committee resumed its investigations, Sir H. Selwin-Ibbetson in the chair. The following members were also present:—Mr. W. E. Forster, Mr. Torr, Mr. Jacob Bright, Mr. Asheton, Mr. King-Harman, Mr. Elliot, Sir George Jackson, Col. Kingcote, Mr. Cameron, Mr. Arthur Peel, Mr. Chaplin, Mr. French, Mr. Anderson, Mr. Wilbrham Egerton, Sir Rainsald Knightley, Mr. Ritchie, &c.

The first witness called was Lord Fitzhardinge, who said he took great interest in the cattle trade, especially that between Ireland and Gloucestershire. Cattle were frequently landed from Ireland so as to evade inspection. Places where Irish cattle are landed should be defined parts of the port, and under rigid inspection by Government officials, not leaving it to the local authority. Cargoes from Ireland were taken twenty miles up the Severn, and then driven back to Bristol market, thus escaping inspection on landing. Farmers would be delighted to have more stringent regulations to protect them from disease.

Mr. Peter, land agent to the previous witness, was called, and, in a very brief examination, corroborated some of the statements made by Lord Fitzhardinge.

Mr. Hermann Gebhardt was further examined. He expressed his opinion that if a dead meat trade was solely relied upon with the Continent, we should have a glut in the market on some days, and a great deal of meat wasted. He admitted that, by the progress of science and more care being taken,

the trade in dead meat with America might succeed, but a great deal came over at present in bad condition. He would return to the former state of restrictions before the last outbreak of Plague. He thought it much better to do away with town dairies, as hotbeds of disease. Milk could be brought into the metropolis as easily as the food of cows—hay, mangels, &c.—and as cheaply.

In reply to Mr. W. E. Forster, he stated that the trade in American meat was too young to place any reliance on it or to be able to foretell its probable success or otherwise. The effect of total prohibition of foreign live stock would make meat very dear indeed in London, and raise the price generally over the country. A difference of 2s. a sheep and 10s. a beast would divert the trade and drive it to Paris. He seldom or ever kept live stock more than a day without selling them. He thought that a permanent cordon drawn round London would be serious, and raise the price of meat; he, however, admitted the cordon drawn round the metropolis for the last five months had not had this effect, because of the American meat, cold weather, &c.

In answer to Mr. Asheton, he said he believed foot-and-mouth disease might originate spontaneously in any country.

In reply to Mr. Ritchie, the witness stated that his objection against dead meat trade with the Continent was, that—first, the meat of Continental cattle was poorer, thinner, than the American; secondly, that it would have to be sold comparatively cheaper dead than alive; and, lastly, because a trade in offal could not be carried on with the Continent.

By Mr. Chaplin: Slaughter of foreign cattle at Deptford would make meat cheaper in London but dearer in the provinces.

On being re-examined by the chairman, Mr. Gebhardt said the result of his evidence was to represent to the Committee, that we should let American meat work its own way in competition with Continental live stock under the usual regulations, and that it was premature at present to make any important alterations in the trade in live cattle.

WEDNESDAY, JUNE 20.

The Committee resumed its investigations this day, Sir H. Selwin-Ibbetson in the chair; also present were Col. Kingcote, Mr. Arthur Peel, Mr. Torr, Mr. King-Harman, Mr. Corry, Mr. Cameron, Mr. Chamberlain, Mr. Jacob Bright, Mr. Elliot, &c.

The first witness called was Mr. Marcus Pool, cattle salesman, Islington and Deptford. In reply to the Chairman, he said the supply of foreign cattle at Deptford Market is decreasing. The market is in the hands of a few wholesale butchers; there is no competition of retail dealers, as at Islington. He had no figures, but the falling-off had been great in French and Dutch cattle. The supply of these was now merely nominal. The decrease had not affected the price of meat; in consequence, to a certain extent, of the trade in American dead meat. If there had been open markets for foreign cattle, and American dead meat arrived here at the same time also, prices would have been much lower. Had the British farmer bred stock as rapidly as the foreigner we should not be dependent on foreign supply. If prices were much lower, and the trade in foreign cattle remained under severe restrictions, the trade would be diverted elsewhere, or possibly the Continental farmers would cease breeding, and return to their former position. He said he had had experience in dealing with American meat delivered at Southampton and Liverpool; a great deal of it was in bad condition. From August to November he dealt in it largely, but had now ceased to have anything to do with it. Prices ranged from 2½d. to 5½d., the average being about 4½d. per lb. A large amount comes over in good condition, and a large amount in bad. He did not think it a remunerative trade; it was principally supported by persons who had patent processes to dispose of. He would admit he never knew a trade except this one steadily increase in the face of a steady loss. He denied that the London cowsheds were hotbeds of disease. It might be a good thing not to allow cows to be sold from the sheds without being inspected. He did not believe pleuro-pneumonia a contagious disease.

In reply to Mr. M'Lagan, he said he had a farm of 150 acres principally grass. If one of his fat beasts were unwell he would send him, if fit, to market. Foot-and-mouth disease was of atmospheric origin. He did not think a dead meat trade with the Continent would pay; the freight would be greater than from America; the price of meat was also higher, so that it would not pay to send it. Ice was too dear, and they would

lose a market for their offal. Dead meat came to London from Ireland in the winter, but did not in summer.

By Mr. King-Harman: He would exclude cattle from all countries in which rinderpest was found, but certainly not from those in which pleuro-pneumonia and foot-and-mouth were. The loss experienced from condemned dead meat was, according to the figures given, about 4 per cent. He was not aware that the loss of live cattle from America, dead and thrown overboard, was $7\frac{1}{2}$ per cent. over the year 1876, although he was not prepared to deny it.

In reply to Mr. Peel, he said he would abolish Deptford Market, because it was not an open market for general competition, and it was no security at all for the prevention of the disease.

To Mr. Chaplin he said the chief objection to converting all our supply of meat into a dead meat trade was, that it would occasionally be a glut in the market, and it would be impossible to consume it.

The next witness called was Mr. Burkitt, a salesman of dead meat at the Smithfield market. Some of the American meat was excellent, and sold at a much higher price than others. American meat that arrived in the last four months of 1876 was not in good condition—sold at an average of 5 $\frac{1}{2}$ d. Speaking of Mr. Link's consignments, from January this year till May, the meat was excellent, selling at about 7 $\frac{1}{2}$ d. per lb. wholesale, being a good profit. He had known the quality in one cargo vary very greatly. The leading butchers of London buy American meat freely when it is in good condition; they are not afraid of supplying this meat to their customers when it is in good order. Some, from Mr. Gillett, had come during the last hot days, from Liverpool, in capital condition. This meat will keep a fortnight or three weeks in the spring, and a month or more in the winter. In hot weather it will keep a week, sufficient time to allow of the retail butcher to get rid of it. He said he had also received consignments last year from the previous witness (Mr. Pool), some of it in a very bad state. The trade with retail butchers in the market had considerably increased. The London butchers are gradually giving up dealing in live animals, and taking to the dead meat trade. He had dealt largely in dead meat from Aberdeen. The trade is steadily increasing. It comes by rail or boat; it takes nearly two days to come to London, and is generally in good condition in the hottest weather. We had a lot of dead meat from Denmark, Tunning, &c. There is no system of preservation, and the meat comes in good condition, with the exception of one or two lots in August, when they begin too early. The quality is not so good as the American. There is no difficulty in a trade in dead meat with the Continent, except that American meat would undersell it. The reason American is sold so cheaply is because of prejudice against it. Government, for instance, will take none of it, nor workhouses. Some American meat was sent up from Glasgow last week in prime order. He did not think there was any danger of glutting the dead meat market. He thought we could do well without foreign cattle, but not without foreign sheep.

In reply to Mr. Chaplin, he said the American meat will keep longer than English, Aberdeen longer than either. The difference in price between best American and best English is 1 $\frac{1}{2}$ d. per lb. If we had a dead meat trade with America, and also with the Continent, meat would certainly be cheaper.

In answer to Mr. Peel, he stated that he had known American beef—bodies—make 8d. per lb., some inferior, in bad condition, as low as 3 $\frac{1}{2}$ d. Aberdeen beef keeps so well because the beasts are not driven, and are killed after they are cool.

In reply to Mr. Anderson, he said all hospitals and public institutions refuse American meat, although they have not tried it; they had an objection to its appearance.

To Mr. French he said we had dead meat from Hamburg for many months in the year with no preparation at all.

In answer to Mr. Chamberlain, he said mutton did not stand the preserving process well from America. Dead mutton, however, might be very well imported from the Continent.

In reply to Mr. Bright, he thought that, with a six weeks' notice, America could send us all the meat we want, even if we had none from the Continent. He thought it, however, a serious thing to stop supplies from the Continent; we must have meat from them dead, if not alive, as they have done weekly from Hamburg for years, from November to June.

In reply to Mr. Torr, he said he had no doubt, if the Germans were not allowed to send us live cattle, they would send us dead meat. If disease was stamped out he was sure it would give an impetus to the English breeders, and would increase our supply of meat, which would be sold at a low price, and of better quality.

FRIDAY, JUNE 22.

On Friday the Committee again met, Sir H. Selwin-Ibbetson in the chair; also present were Mr. W. E. Forster, Mr. Chaplin, Mr. Ascheton, Colonel Kingscote, Mr. Arthur Peel, Mr. Elliot, Mr. King-Harman, Mr. Anderson, Mr. French, Mr. Murphy, Mr. Wilbraham Egerton, Mr. Chamberlain, Mr. Jacob Bright, Mr. Holmes, Mr. Kitchie, &c.

The first witness called was Mr. John Giblett, cattle salesman in the Islington Market. He dealt largely in foreign cattle, much more than in home stock. The principal consignments to him were from Oporto, France, and America. There has been a falling-off of the French cattle since they have had to be slaughtered at the port of landing. His firm alone in one year had sold 9,998 head of French beasts some ten years ago. Only about 2,000 annually came from France to Deptford since the French cattle have been scheduled. Spanish and Portuguese cattle make nearly as much money as English beasts. Their offal is more valuable, and their hides sell at double the price. They are the healthiest of European cattle. American cattle were consigned to him *via* Southampton. The trade is increasing, but it does not answer except in fine weather, and cannot be successfully conducted all the year round. During the last three months he had received large quantities of American dead meat. The meat of American cattle killed in this country is worth 3d. per lb. more than American imported dead meat. Some of the latter comes in good condition, others inferior. The dead-meat trade with America is a great benefit to the poor. A cargo consigned to him *via* Southampton was delayed one day on its journey per railway, and deteriorated during the time about 6 $\frac{1}{2}$ d. per stone. He believed the trade would continue to increase in cold weather, but it would not do in hot weather. He argued it would be impossible to carry on a dead meat trade in Spanish cattle—a country where the weather is so hot. Such serious losses occur in the dead meat trade with America in hot weather, he did not see how it could pay with Spain. Cattle importation should be allowed from all countries except those in which plague exists. As for foot-and-mouth, it was in every country, and was purely atmospheric; he thought the restrictions generally should be relaxed in this country; especially, at least, was it necessary to have uniform regulations throughout, under the direction of the central authority. He would have all cattle exposed at Islington Market marked and forbidden under penalty to enter any country market afterwards.

In reply to Mr. W. E. Forster, the lowest price he had known beef was 4 $\frac{1}{2}$ d. per lb. The causes of the gradual rise in meat were the increase of population, the cattle disease restrictions, and the greater prosperity of the working classes. If we prohibited live cattle from the Continent meat would be ruinously, fabulously dear. He admitted there were risks and losses in the transport of live stock as well as of dead; even those sent from the Continent suffered sometimes severely from delay during stress of weather. Cattle he had consigned to him from New York cost £7 10s. per head for freight; they sold all round at an average of £30 a-piece.

By Mr. Wilbraham Egerton: England does not breed as many cattle as she might, nor does she seem to care to do so. Therefore we should not keep out foreign cattle. Fear of disease is not the reason farmers do not breed more.

In reply to other members he continued to assert the spontaneous, instantaneous generation of foot-and-mouth disease. He testified to the extraordinary quality of American fat meat, but that which was sent here dead had an unsightly appearance in hot weather.

The next witness examined was Mr. William Stratton, Kingstone Deverill, Warminster. He said he farmed in Wiltshire, and suffered severely from foot-and-mouth disease. He had always taken an interest in the question, especially as one of the Executive Committee on Contagious Diseases in Wilt. He had got statistics showing the extent of foot-and-mouth in that county in 1873 and in 1875, which the witness read, and from which it appeared that in 1873 one-half of the cattle and one-sixth of the sheep were attacked by foot-and-

mouth disease. The loss was very serious, especially in a dairying county like theirs, although deaths were few. In their county they had applied all the regulations in their power towards the prevention of pleuro-pneumonia and foot-and-mouth disease. They were only sorry they could not extend them further. Mr. Stratton then read the recommendations made by the Central Chamber of Agriculture to the Privy Council, which contained proposals of a very stringent nature for suppression of disease. On this subject he said the Chamber was unanimous. With a view of getting rid of the disease at home, farmers would certainly submit to the regulations proposed. If we had no foreign diseases the stock of this country and the production of meat would increase to an enormous extent. Even if dead meat could not be brought in the summer, if there was a scarcity at that time of the year, farmers would prepare to bring out their cattle to meet the demand, and so keep up the supply. He expressed great surprise that the Veterinary Authority of the Privy Council should continue to assert that farmers would not submit to restrictions for the suppression of contagious diseases. There is less foot-and-mouth in Wilts now, he said, than has been for many years, in consequence of the late restrictions in that county against plague. He was confident foot-and-mouth disease was propagated by contagion only. He wished also to state that the prevalence of contagious disease in this country prevented us from exporting high-bred stock for the improvement of beasts on the Continent and in the colonies, which was a loss to them and to us.

In reply to Col. Kingcote, he said the loss from foot-and-mouth disease in the case of milch cows was £5 per head; taking old and young cattle together the loss would be about £2. They always had it in his county from Bristol when infected cargoes arrived there. He was certain the breeding of cattle was greatly affected by the fear of foreign disease. He would advocate quarantine stations for the importation of store stock for breeding purposes.

In reply to Mr. Chamberlain, he said the restrictions proposed should be paid out of the national exchequer, but, even if this were not done, he thought farmers would not object to be taxed for the support of local inspectors.

Being questioned by Mr. Ritchie, he said the Central Chamber asks for slaughter of foreign animals at the port of debarkation because they think it more likely they might get that than total prohibition of live stock—a system, however, which they would much prefer. He was sure a large trade in dead meat would at once take place with the Continent if foreign stock were prohibited. Large quantities of dead meat come here now from the Continent.

In reply to Mr. Forster, he said that the regulations suggested to the Privy Council last year asked for slaughter at the port of debarkation only; since that they had passed a resolution in favour of slaughter at the port of embarkation. There were fewer cattle and sheep bred in Wiltshire now than ten years ago. He was satisfied that foot-and-mouth disease cannot originate spontaneously by bad treatment, or from any other cause. If so-called practical men say it can, it is because they are ignorant, and don't know as much as scientific men.

In reply to Sir George Jenkinson, he said he mixed with farmers every day, and knew they would submit to stringent regulations.

Professor John Gamgee was then called. In reply to the Chairman, Professor Gamgee said, although not practising as a veterinarian now, he had never ceased to feel a deep interest in the subject of contagious diseases of foreign origin. He still continued to believe, as he did when he last appeared before a similar committee to the present one, that the presence of foreign diseases in this country was a greater injury to us than would be the loss of all foreign live stock imports; and he still advocated rational interference with the foreign cattle trade and the minimum of interference with the home trade. He certainly had foreshadowed the present dead meat trade before the committee in 1873. He had since that almost entirely devoted himself to a study of the subject. For every single beast that dies from the ordinary diseases of stock, three die from the effects of foreign imported contagious diseases. Seventy-five per cent. of the mortality in our home-bred stock is due to foreign imported maladies; 25 per cent.—certainly no more than 30 per cent.—die from indigenous diseases and accident. Foot-and-mouth is different to almost all other foreign diseases, in that it will attack all warm-

blooded animals; an absolutely closed place against stock may be infected by some of the lower animals entering it. But it is easily exterminated, for if we closed our ports to-morrow it would die out of the country in a year. It is probably the most perishable of all contagia. It quickly dies out on the ground, and cannot appear again without the introduction of fresh germs from abroad. The losses by rinderpest in this country and other countries are nothing to compare with those resulting from foot-and-mouth and pleuro-pneumonia—the alarming danger of plague necessitates its being quickly stamped out. Prohibition of live stock is more necessary because of the constant importation of pleuro-pneumonia and live stock than the occasional importation of plague. He thought the Continent might easily turn their whole trade from live stock into one of dead meat. If our ports were closed they would at once set up slaughter-houses at the ports of embarkation, and send as dead meat. Should their trade be diverted in another direction, the American supply would fill up the gap; there are ten millions of beasts in Texas. He was quite certain the consumer would not suffer. With regard to foot-and-mouth disease we might return to the state we were in in 1835, without a policeman at every cow's tail. It is not safe to import from the United States, for the Eastern States are suffering from pleuro-pneumonia. From 1714 to 1770 we were continually affected with disease, and great scarcity of meat prevailed; between 1770 and 1840 there was a large increase of stock and cheap meat; from 1840 till 1877 cattle disease again appeared, and a progressively high price of meat and a scarcity of home stock has followed. Canada is healthy, and he had no serious objection against her live stock as such, but he thought it a mistake commercially to import live cattle from thence. As a matter of policy he would treat all alike, and totally prohibit foreign fat stock, dealing with animals required for breeding purposes by quarantine under special regulations. He believed town dairies were great centres of infection. There is nothing really in them that engenders disease, but the system of buying and selling cows weekly kept up the infection. He would abolish town dairies, and have suburban ones instead. He said he discovered when in Texas, in 1868-9, that to preserve meat by any method it was necessary to cool the meat down first, and that by a system of producing currents of cold dry air the meat was partially desiccated, and would keep for almost any length of time in such condition. The high price of ice when he was in America, and the want of effective machinery for the cheap production of cold, prevented him at the time from successfully carrying out his experiments.

In reply to Mr. W. E. Forster, he said that it was in consequence of recent experience of how cattle plague broke out from Deptford, he now advocated slaughter of foreign animals at the port of embarkation instead of at the ports of landing.

At this stage of Professor Gamgee's examination the Committee again adjourned.

REVIEW OF THE CATTLE TRADE DURING THE PAST MONTH.

The cattle trade has not been distinguished by any important feature during the month. The removal of the restrictions compelling the slaughter in the immediate neighbourhood of all beasts once exhibited in the Metropolitan Market, has caused stock to come to hand rather more freely. The Norfolk season may now be considered as closed, and the Lincolnshire commenced. The past season has not been a brilliant one, and the prospect is still rather discouraging, graziers just now passing through troublous times, owing to the cattle plague; but fresh cases are very scarce, and there is some indication that the disease has been stamped out. From Scotland and Ireland we have received nothing during the month. From abroad America has forwarded us a fair supply, and there has also been a good show of Spanish, besides an average sprinkling from Sweden and Denmark. Trade at no time has been brisk. For the best breeds 6s. per 8 lbs. has seldom been exceeded, whilst secondary and inferior stock has ruled comparatively less firm in value.

The sheep pens were very sparingly filled, in consequence of the foreign receipts being mostly detained at Deptford. But the quality and condition of the bulk of the supply was eminently satisfactory. Though not active, the demand has

rated firm and full prices have been realised for fine breeds. The best Downas and half-breeds have made 6s. 6d. to 6s. 8s. per 8lbs.

The lamb trade though quiet has been firm. Calves and pigs have been without feature.

The imports of foreign cattle into London during the month were:—

Beasts	3,130
Sheep and Lambs	60,570
Calves	2,882
Pigs	268

Corresponding period in 1876.....	68,870
" 1875.....	93,838
" 1874.....	51,702
" 1873.....	77,744
" 1872.....	47,123
" 1871.....	92,394
" 1870.....	35,744
" 1869.....	57,212
" 1868.....	24,655
" 1867.....	48,503
" 1866.....	47,425

The arrivals of beasts from our own grazing districts, as well as from Scotland and Ireland, have been as under:—

	1877.	1876.	1875.	1874.	1873.
Norfolk, Suffolk, Essex, and Cambridgeshire.....	5,250	8,350	10,800	6,800	8,050
Lincolnshire	1,300	1,000	1,200	500	210
Other parts of England...	1,350	2,160	3,270	2,750	1,700
Scotland	—	139	271	316	7
Ireland	—	—	—	100	560

The total supply of stock exhibited and sold at the Metropolitan Cattle Market during the month were as follows:—

Beasts	12,460
Sheep and Lambs	74,940
Calves	880
Pigs	120

COMPARISON OF SUPPLIES.

	BEASTS.	SHEEP.	CALVES.	Pigs.
1876	18,710	133,440	4,875	206
1875	21,411	225,161	5,520	455
1874	20,000	168,990	4,485	570
1873	7,425	149,640	4,980	712
1872	16,660	120,360	4,014	461
1871	15,118	170,715	3,626	965
1870	18,554	199,139	3,767	625
1869	20,209	167,770	2,780	690
1868	19,650	177,690	2,875	1,480
1867	16,270	146,650	2,600	2,048
1866	18,920	130,880	1,864	1,782
1865	24,950	165,720	4,278	3,210
1864	25,890	138,450	2,786	3,280

Beasts have sold at 4s. 6d. to 6s. 0d., sheep, 5s. to 6s. 8d., lambs, 7s. to 8s. 4d., calves, 5s. to 6s. 6d., and pigs 4s. to 5s. per 8 lbs. to sink the offal.

COMPARISON OF PRICES.

	1873.			1874.		
	s.	d.	s. d.	s.	d.	s. d.
Beef	5	0	to 6 6	4	6	to 6 0
Mutton	5	0	to 6 5	4	4	to 5 4
Lamb	7	0	to 8 6	6	0	to 7 6
Veal	4	6	to 6 4	4	0	to 5 6
Pork	4	2	to 5 4	4	0	to 5 4

	1875.			1876.		
	s.	d.	s. d.	s.	d.	s. d.
Beef	4	6	to 6 4	4	6	to 6 4
Mutton	4	6	to 7 0	4	6	to 7 4
Lamb	4	6	to 8 6	7	0	to 8 6
Veal	4	6	to 5 8	4	6	to 6 2
Pork	4	6	to 5 4	4	6	to 5 10

REVIEW OF THE CORN TRADE,

FROM THE MARK LANE EXPRESS FOR THE WEEK ENDING JUNE 25.

With the exception of a few warm showers the weather during the past week has been of a brilliant character, and the sky almost cloudless. The growing crops have made a further satisfactory advance towards maturity, excepting in districts where the drought has been so severe as to check growth. The high temperature and dry atmosphere have been alike favourable for the development of the wheat and the cutting of meadow hay. On the heavy soils wheat is somewhat late in earing, but on the light lands the ears are plentiful, and a continuance of favourable weather during the critical period of blooming will do much to relieve the anxiety and revive the hopes of the farmer. The forcing power of the summer sun has favoured the luxuriant growth of vegetation, though the country still retains some traces of the effects of the backward spring. Barley and oats have improved in appearance, but the effects of the wet seed-time, and cold subsequent period, will most probably be traceable at harvest, especially in the yield of the former cereal. Haymaking has now commenced, and the cutting of both grass and clover is by no means unsatisfactory. Weather influences being now paramount in the trade, it is not to be expected that anything like activity should prevail in the market as long as the sun shines; still the amount of depression which has actually been experienced in the wheat trade is also in a great measure due to the continuation of very heavy imports into London, and indeed into the United Kingdom generally. The arrivals up to Friday were nearly 70,000 qrs., and these, coming upon the large supply of 83,000 qrs. during the preceding week, have so

disabused the minds of buyers of any idea as to future scarcity that selling to any extent has been quite impracticable, and granary room has certainly been more in request than grain. Of course such a state of stagnation would speedily disappear under the action of unfavourable weather but at the moment a feeling of indifference possesses the minds of buyers, now that weather, politics, and decreased summer consumption are all arrayed on their side. The weekly return has, it is true, been swelled by the arrivals of shipments from Southern Russian ports, which have now been closed since the middle of May; still, the large outward movement from Germany has proved the existence of a much heavier surplus for export than was anticipated, and the action of this country, North Russia, and India has been so significant that the falling off of American supplies has come to be regarded as a matter of secondary importance. Still, the light shipments from America, and the closing of the Southern Russian ports, are facts which would quickly come into prominence if unfavourable weather or political complications were to bring about any improvement in demand, and at the close of the week there certainly appeared symptoms of returning firmness. The sales of English wheat noted last week were 22,914 qrs., at 64s. 1d., against 25,120 qrs., at 47s. 11d. in the previous year. The London averages were 65s. 4d. on 223 qrs. The imports into London for the week ending June 16th were 1,456,920 cwt. wheat, and 81,811 cwt. flour. Under the combined influence of brilliant summer weather and continued heavy supplies of foreign grain, the aspect of the trade on Monday last was characterised

by great languor, and a tendency towards a further decline in the value of almost all cereal produce. Buyers showed very little desire to operate, and at the opening of the market business was almost at a standstill. The week's arrivals of home-grown wheat were 2,953 qrs., and the supply fresh up again very small. Factors would have accepted a reduction of 2s. per qr. on the rates of the previous Monday, but millers held off, and at the close of the market very little business had been transacted. The imports of foreign were unusually heavy, the total arrivals amounting to something over 88,000 qrs. Of this large supply 26,000 qrs. were contributed by Germany, 28,600 qrs. by Russia, and 18,730 qrs. by India, the arrivals from American Atlantic ports being 4,999 qrs. Prices were unable to stand against such a heavy importation coming upon an already sufficiently depressed market, and, with a moderate attendance of millers, who bought very sparingly, all varieties gave way fully 2s. per qr. on the week. The week's exports were 1,238 qrs. The arrivals of Barley consisted of 466 qrs. of home-grown and 22,241 qrs. of foreign. Malting descriptions were scarce and nominally unaltered in value, but grinding sorts were purchasable on rather easier terms, the trade for both, however, being exceedingly dull. Maize, also, sold slowly at barely previous currencies, the week's arrivals being 22,824 qrs. The imports of oats were 72,064 qrs., and, with supply much in excess of demand, sales could only be effected at a decline of 6d. to 1s. per qr. On Wednesday there were 310 qrs. of English wheat, and 53,400 qrs. of foreign reported. With a cloudless sky and an unusually thin attendance even for a Wednesday, business was quite lifeless, and, in the absence of transactions, quotations remained nominally unchanged both for wheat and spring corn. On Friday the return showed 740 qrs. of English and 69,680 qrs. of foreign. Signs of increasing firmness were noticeable in the wheat trade, and Russian descriptions sold readily at a decline of 6d. per qr. on Wednesday's prices. Feeding corn was unaltered. The imports of flour into the United Kingdom for the week ending June 16th were 81,811 cwts., against 187,195 cwts. in the previous week. The trade has been entirely wanting in activity, and, with a languid inquiry, values have further receded 1s. per sack and barrel. The week's import of beans were 96,859 cwts., and of peas 34,749 cwts., showing an increase on the former of 12,775 cwts., and a decrease on the latter of 5,029 cwts. Both articles have been in rather better request, and, although quotations have not advanced, the present low range of prices has caused beans to attract more attention. The deliveries of malt were 22,286 qrs., but there were no exports. Sales have progressed slowly, but former currencies have been fairly supported, as a continuance of the present weather should be productive of increased activity among the brewers. Business in agricultural seeds has been confined to a very narrow compass, as is usual during the summer months, and the trade has presented no fresh feature calling for remark. Holders of clover and trefoil still prefer to hold over their stocks sooner than accept the low prices offered. Fine mustard and rape are still very scarce, but the inquiry for both has been very poor. Canary has also been difficult to move, and prices evince a drooping tendency. At the principal provincial exchanges wheat has been sparingly offered by the farmers, and a languid tone, consequent upon the brilliant weather, has prevailed throughout the country trade. In a few instances the firmness of holders has prevented the markets being written cheaper, but in the majority of cases a decline of 1s. to 2s. per qr. on the week has taken place, with a dull sale therewith. At Liverpool, on Tuesday, the market was fairly attended, and, with increased arrivals, wheat met a slightly improved inquiry, at 2d. per cental

reduction from the currencies of the previous Friday. Flour was also rather cheaper to sell, but an improved demand was experienced for maize, at an advance of 6d. to 9d. per qr. Beans were the turn dearer, but other descriptions of feeding corn sold slowly at former prices. At Newcastle there has been scarcely any business passing in wheat, as buyers have shown no disposition to operate, and many holders are landing their grain sooner than force sales. At Peterborough wheat has been marketed very sparingly, but in the light business done, sellers have accepted 1s. per qr. less money.

At Edinburgh the markets have been scantily supplied with grain from the farmers, and wheat was difficult to sell, although offered at a reduction of 1s. per qr. The price of flour was reduced by millers 1s. per sack, but spring corn realised former currencies. At Leith the weather has been fine, although rather cold at night, and the growing crops have made rapid progress. With fair arrivals of wheat and oats, the trade has been very depressed, and prices have declined for nearly all articles. At market on Wednesday the attendance was small, and both native and foreign Wheat was neglected, and 1s. to 2s. per qr. cheaper to sell. Flour was also 1s. per sack cheaper, and Oats could only be moved at a reduction of 6d. per qr. At Glasgow the forcing weather has caused great dullness in the trade, and buyers have purchased wheat very sparingly, in spite of the concession of 1s. to 2s. per qr. offered them. Maize has been somewhat firmer, in spite of large arrivals.

At Dublin the weather has been very warm, but some showers have fallen. The grain trade has been in a state of stagnation, and with next to nothing doing, quotations remain nominally unaltered for both wheat and maize. The same may be said of the trade at Cork, where, in the light business passing, prices have favoured buyers. Maize has receded 6d. per qr., and oats have ruled quiet at unaltered quotations.

The weekly reports from Mark Lane are as follows:—

Monday, June 4.—The arrivals during the past week have been: English Wheat, 2,245 qrs.; foreign, 84,786 qrs. Exports, 1,813 qrs. The supply of English Wheat fresh up to market this morning was again very small, and factors asked an advance of 1s. per qr., but the change to fine weather checked business, and sales could only be effected at last Monday's prices. Of foreign the arrivals were fair, and with an average attendance of millers an improved demand was experienced, at fully late rates. Country flour: 13,609 sacks. Foreign: 19,242 sacks, and 1,465 barrels. The trade ruled quiet but steady, and prices were unchanged for both sacks and barrels. English barley, 317 qrs. Foreign 9,880 qrs. Both malting and grinding qualities were fully as dear, with a somewhat improved inquiry. Malt, English: 18,172 qrs.; Scotch: 678 qrs. Exports: 1,110 qrs. A slow sale at last week's quotations. Maize, 82,046 qrs. The trade off stands was difficult, but a retail business was transacted at last Monday's prices. English oats, 460 qrs.; Irish, 13 qrs.; foreign 76,205 qrs. In better request at fully previous currencies. English Beans, 209 qrs.; foreign, 12,560 qrs. A slow sale at nominally late rates. Linseed, 3,751 qrs. Unaltered in value or demand.

Monday, June 11.—The arrivals during the past week have been: English wheat, 1,189 qrs.; foreign, 62,960 qrs.; exports, 1,026 qrs. The small supply of English wheat in factors' hands this morning was held for last week's prices, but the fine weather exercised a depressing effect on the trade, and to make sales a decline of 1s. to 2s. per qr. on the week had to be submitted to; of foreign the arrivals were liberal, and with a fair attendance of millers a quiet consumptive demand was experienced at a similar reduction. Country flour,

13,479 sacks; foreign, 4,672 sacks and 500 barrels. Both barrels and sacks were the turn lower to sell. The nominal top price of town-made was reduced from 60s. to 56s. per sack. English barley, 479 qrs.; foreign, 12,214 qrs. A quiet trade, at about last week's prices. Malt, English, 15,350 qrs.; Scotch, 1,486 qrs. Exports, 169 qrs. Holders were more anxious to sell, but business was slow, and quotations nominally unaltered. Maize, 16,577 qrs. A slow sale, at barely last week's prices. English oats, 384 qrs.; foreign, 73,762 qrs. Fine corn was fully as dear, but inferior descriptions of Riga were only saleable at 6d. per qr. less money. English beans, 124 qrs.; foreign, 3,872 qrs. In the absence of business prices remain nominally unaltered. Linseed, 8,046 qrs. A slow sale, at late rates.

Monday, June 18.—The arrivals during the past week have been: English wheat, 2,503 qrs.; Scotch, 450 qrs.; foreign, 83,042 qrs. Exports, 1,238 qrs. The supply of English wheat fresh up to market this morning was again very small, and to effect sales a reduction of 1s. to 2s. per qr. on last Monday's prices was necessary, but very little business transpired. Of foreign the arrivals were very heavy, and with a moderate attendance of millers, the trade ruled slow, at a decline of 2s. per qr. on the week. Country flour 12,231 sacks; foreign 3,553 sacks. Sales progressed slowly, at about last week's currencies for both sacks and barrels. English barley, 416 qrs.; Irish, 50 qrs.; foreign, 22,241 qrs. Business was excessively dull, but quotations were nominally unaltered for both grinding and malting varieties. Malt: English, 20,791 qrs.; Scotch, 1,495 qrs. Holders evinced an increased desire to sell, but there was very little business done. Maize, 22,824 qrs. Exports, 2,281 qrs. A quiet trade, at barely late rates. English oats, 637 qrs.; foreign, 72,064 qrs. The continued heavy arrivals depressed the trade, and sales were difficult even at a decline of 6d. to 1s. per qr. English beans, 160 qrs.; foreign, 7,138 qrs. Very little inquiry, and quotations ruled the turn in buyers' favour. Linseed, 1,201 qrs. A slow sale, and 1s. to 2s. per qr. cheaper to sell.

Monday, June 25.—The arrivals during the past week have been: English wheat, 1,881 qrs.; foreign, 88,528 qrs.; exports, 770 qrs. The supply of English wheat fresh up to market this morning was again very small, and sales progressed slowly at about last Monday's prices; of foreign the arrivals were unusually heavy, and consisted principally of Russian descriptions. There was a fair attendance of millers, and an improved demand was experienced at fully late rates. Country flour, 9,805 sacks; foreign, 2,588 sacks and 160 brls. The trade ruled quiet for both sacks and barrels at unaltered quotations. English barley, 201 qrs.; Irish, 150 qrs.; foreign, 3,478 qrs. Malting descriptions were unaltered, but grinding sorts were dull and the turn cheaper to sell. Malt: English, 19,015 qrs.; Scotch, 1,051 qrs. Exports, 628 qrs. In rather more request, at previous prices. Maize: 16,614 qrs. A slow sale at last week's quotations. English oats, 220 qrs.; foreign, 65,153 qrs. There was an improved inquiry, and an advance of 3d. to 6d. per qr. on last Monday's prices was occasionally obtainable. English beans, 194 qrs.; foreign, 49 qrs. In limited request, and unaltered in value. Linseed, 3,435 qrs. Unchanged.

CURRENT PRICES OF BRITISH GRAIN AND FLOUR IN MARK LANE.

	Shillings per Quarter			
	old	new	old	new
WHEAT, Essex & Kent, white.....	57 to 60	60 to 65	red	57 to 63
Norfolk, Lincolnsh., and Yorksh. red old	53	new 56	60	
BARLEY Chevalier new.....	47	55		
Grinding	36 to 39	Distilling	34	37
MALT, pale.....new 66	72	old 60s.....brown	53	56

RYE	40	46
OATS, English, feed 25 to 30	Potato	—
Scotch, feed.....	Potato	—
Irish, feed, white	Fine	—
Do, black.....	Potato	—
BEANS, Masagan.....	30	34
Harrow	—	—
PRAS, white boilers 34	40	Maple 36 to 43
FLOUR, per sack of 260lbs., best town households ..	49	46
Best country households, old.....	44	49
Norfolk and Suffolk, old	45	47

FOREIGN GRAIN.

	Shillings per Quarter	
WHEAT, Danzig, mixed	62 to 64	extra
Königsberg	63	extra
Rostock	63	old
Silesian, red	—	white
Pomer., Meckberg., and Ustermark.....	red	63
Ghirka 63 to 66.....Russian, hard, 56 to 66	Saxonska	60
Danish and Holstein, red	red American	64
Chilian, white 59.....Californian 63	Australian	61
BARLEY, grinding 25 to 36	distilling	39
OATS, Dutch, brewing and Poland 25 to 27	feed 28	24
Danish and Swedish, feed 24 to 26	Stralsund	26
Canada 24 to 26	Riga 18 to 19	Petersburg
TARBS, Spring	—	40
BEANS, Friesland and Holstein	—	—
Italian	31 to 33	Egyptian
PRAS, feeding and maple.....	36	fine boilers
MAIZE, white	37	yellow
FLOUR, per sack, French 50	53	Spanish, p. sack
American, per bri.	27	extra and dble.

BRITISH SEEDS.

Mustard, per bush, brown 13s. to 16s., white...	12s. to 16s.
Oatmeal, per qr	new 54s. to 55s. fine...
Clovers:ed, fine red and dark purple 90s., com...	65s. 70s.
Coriander, per cwt.	32s. 34s.
Tares, winter, new, per bushel.....	6s. 7s.
Trefoil, new	26s. 28s.
Ryegrass, per qr.	38s. 42s.
Linseed, per qr.	sowing 68s. to 69s., crushing
Linseed Cake, per ton	£10 10s. to £11 0s.
Rapeseed, per qr.	new... 74s. 76s.
Rape Cake, per ton	£5 10s. to £5 12s. 6d.

FOREIGN SEEDS.

Coriander, per cwt.	34s. to 36s.
Oatmeal, red 64s. to 74s.	white 63s. 80s.
Hempseed, small 56s. to 58s. per qr.	Dutch 42s. 44s.
Trefoil	32s. 34s.
Ryegrass, per cwt.	38s. 42s.
Linseed, per qr.	Baltic 53s. to 53s., Bombay 54s. 55s.
Linseed Cake, per ton	£10 5s. to £11 0s.
Rape Cake, per ton	£5 10s. to £5 12s. 6d.
Rapeseed, Calcutta	54s. 56s.
Carraway	46s. 48s.

IMPERIAL AVERAGES

For the week ending June 23, 1877.			
Wheat	34,738½ qrs.	64s. 0d.	
Barley	312½ ..	36s. 11d.	
Oats	932½ ..	26s. 2d.	

LONDON AVERAGES.

Wheat	323 qrs.	65s. 4d.
Barley	161 ..	36s. 9d.
Oats	— ..	—s. 0d.

COMPARATIVE AVERAGES.

WHEAT.				BARLEY.				OATS.			
Years.	Qrs.	s.	d.	Qrs.	s.	d.	Qrs.	s.	d.	Qrs.	s.
1873 ..	30,455½	..	58	8	506	..	36	8	2,361½	..	25
1874 ..	34,318½	..	60	4	524	..	43	3	974½	..	31
1875 ..	43,109½	..	43	11	333½	..	33	3	870½	..	31
1876 ..	26,896	..	48	4	963½	..	32	6	680½	..	28
1877 ..	34,738½	..	64	0	312½	..	36	11	932½	..	26

AVERAGES

For the Six Weeks Ending				Wheat.	Barley.	Oats.
	s.	d.		s.	d.	s.
May 19, 1877	66	9	26	11	29	0
May 26, 1877	66	6	37	9	28	1
June 2, 1877	66	11	36	2	17	2
June 9, 1877	66	0	36	6	27	7
June 16, 1877	64	1	34	7	26	1
June 23, 1877	64	0	36	11	26	2
Aggregate Avg. of above.	66	3	37	0	27	4
The same period in 1876	66	8	33	4	27	6



Engraved by E. Hacker

The Maid of the Moor.

Published by J. W. Smith, 10, Newgate Street, London.

AUGUST, 1877.

PLATE II.

THE MAID OF THE MOOR.

While the farmer is gathering in the harvest, or thinking about it, the M.P., weary of his arduous duties, pays away to the Moors, determined, as he has not made a hit in the House, to hit or miss out of it. Tom Barry, the clown, used to tell a story of three M.P.'s who were out grouse shooting, and late in the day were overtaken by a thick mist, when close on to an old shed which they made for and passed the night in—"as all the moor, like every other Moor, was black." Finding they had only one sandwich left, a long, animated, and eloquent debate ensued, over a bottle of mountain dew, as to what should be done with it, the honourable member for England proposing one thing, and the honourable member for Scotland another, while the honourable member for Ireland said he quite agreed with his honourable friends and then entirely disagreed with them, amidst cries of "divide," "move the previous question," "order," "chair," "hear, hear," "oh, oh," cat-calls, groans, laughter, and cheers, which must have awoke the Maid of the Moor. At last the honourable representative of Ireland moved that they should

have a sleep over it and the one that had the most wonderful dream should have the sandwich for his breakfast, which was unanimously agreed to. Worn out with State and domestic affairs they were soon snoring. Aurora having dispersed the fog, crept through a crack in the shedding, and playing on the tip of the jolly nose of the honourable Scot caused him to sneeze. Upon which he arose and shook his hoary locks, and the Englishman, saying "Weel mon, what mit ye drame?" The representative of England, after a yawn, collected his thoughts, and said—"I dreamt that I saw forty thousand sheep in a field, and a shower of rain coming on they all took shelter under the leaf of a turnip—beat that." "And I dreamt," continued the Scot, "that I saw forty thousand men and forty thousand women and twice as many boys and girls hammering a large rivet into a pot." "And what was the pot for?" said the Englishman. "To boil your turnip in," replied the Scot, and then waking the Irishman told him their dreams, adding, "Weel Paytrick whit mit ye drame?" "Sure," said Pat, "I dreamt that I was very hungry and got up and ate the sandwich!"

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

MEETING AT LIVERPOOL.

THE IMPLEMENTS.

To traverse the miles of shedding containing the implements, machinery, and miscellaneous exhibits at Liverpool was a task almost appalling, and if in the limited time at our disposal we have omitted to notice any articles deserving of mention, we shall be readily excused by all who know what there was to do. There are only a few more stands than there were at Birmingham last year; but the ground occupied is much more extensive, and, if we are not mistaken, the stands are larger, and fuller of exhibits, too. The labour of inspecting the implement department of the show was, however, lightened, as much as it could be, by the admirable arrangements of the stands. Never before have we seen them so well set out, and as at some recent shows we have had occasion to find fault with the arrangement of the stands, we all the more gladly give honour to whosoever is—or are—responsible for the Liverpool arrangement. Going from the first stand to the last, as we did go, there was not a single case of difficulty in following the numbers as printed in the catalogue until we came to the end of Stand 323, after which it was necessary to go to the opposite side of

the yard in order to follow the numbers consecutively. Visitors were not expected to go up and down each row of stands in order to follow the catalogue from beginning to end, as they were at Bath, and as they have been a many other shows recently visited; but the arrangement was as we have often pointed out that it ought to be. Consequently, the unpleasant alternative of traversing all the rows of shedding twice, or going backwards through half the catalogue, was avoided, to the great comfort of the reporters of the implement and machinery department of the show.

Beginning at the beginning, we came first to the stand of Messrs. Lunnitt and Son, of Warwick, on which we noticed their improved "Acme" silk flour-dressing, bran-dressing, and offal-separating machines. On the next stand Messrs. Brookes and Co. showed a number of "Luc Trepboer" feeders, which we noticed in our report of the Bath show. Also noticed at Bath were Messrs. Aggio and Stidolph's self-acting machines for separating weed-seeds from corn and other agricultural seeds. These machines have been much improved since

we saw them last year at Birmingham. In competition with these, but working on a different principle, was Mr. Bove's Suffolk seed and grain cleaner and separator. The Maldon Iron Works Company had a large collection of horse-gears, chaff cutters, mills, turnip cutters, and cattle troughs. Mr. John Baker, of Wisbeach, Cambridgeshire, showed his well-known winnowing and dressing machines. Mr. Bobby's dressing and screening machines were the next to attract attention, and these were unaltered in construction. Bobby's haymakers, again, were apparently in their old form of excellent adaptation. E. H. Bentall and Co., of Heybridge, Maldon, had a large show of their chaff cutters, pulpers, corn-crushers, and oilcake-breakers; also a horse gear and intermediate motion. An admirable invention as a safety-guard to a chaff cutter was shown for the first time by Mr. T. Allcock, of Ratcliff-on-Trent. This is the most effective guard of the kind that we have seen, as it seems to be impossible for the feeder to get his arm drawn into the machine, a slight pressure on the guard causing an instantaneous reversal of the motion, and such pressure being apparently unavoidable as soon as the arm is on the road to being drawn in. Chaff engines, horse hoes, turnip cutters, and cheese presses were to be seen in great variety on Carson and Toone's stand. In examining Mr. Kearsley's mowers and reapers we were struck with the usefulness of their loose steel plate linings to the fingers. These linings, which, with the fingers, are held by a single bolt, can be easily taken out to be sharpened. Mr. Kearsley has also improved his machines by making them with frames of wrought, angle-iron, and by bringing the lifting action outside the hinge of the finger-bar. Mr. William Anson Wood has this year adapted the controllable action for rakes to his reapers, with other improvements of construction. He showed self-delivery and manual-delivery reapers, mowers, and combined machines. Burgess and Key's new reaper was described in our report of the Bath Show. Their apparatus for binding corn into sheaves with straw bands is not yet perfected, and therefore was not shown, though down in the catalogue. The latest improvements have been adapted to the reapers and mowers of this firm, which was the first to introduce the direct action of the knife. An improved water lifter, used principally in India, was also on the stand. In our Bath report we also spoke most favourably of Vipan and Headly's patent combined horse hoe, ridging-plough, and potato raiser. As a double ridger this implement will make five complete ridges, or raise four rows of potatoes in one bout. The Bedford prize horse-hoe, a new and cheap corn-crusher suitable for small farms, and a large selection of farm and garden implements were shown by this firm. F. & H. Mattison have reconstructed their "Climax" and "Excelsior" reapers; but when we visited their stand on Tuesday morning it was not arranged ready for inspection. V. T. & V. Barford, of Northampton, exhibited several sizes of their portable farmers' steaming apparatus, a horse-hoe, and hand-drills. Mr. Bamlett's iron-framed and wood-framed mowers, reapers, and combined machines are well-known, and, as they appear to be unaltered in construction, need no detailed description.

The chief novelty on Coleman and Morton's stand was their patent double-circulating boiler. The construction and principle of working are thus described:—"It consists of two small shells, one above the other, connected by vertical flanged tubes. Every alternate connecting tube is lengthened by the insertion of a light moveable tube reaching to within a few inches of the lower shell. The furnace is placed below the lower shell, the flame and heated gases passing along underneath and returning by the flues on either side towards the front, where they rise and traverse the sides and bottom of

the upper shell and the vertical tubes, thence passing to the chimney. It will be seen at once that the natural law governing the action of heated water comes by this arrangement into full play. The boiler being almost enveloped in fire and flame, there is a constant and rapid rush of heated water from the lower to the upper shell through the short connecting tubes. At the same time there is a constant down-pour of water through the long tubes from the upper to the bottom of the lower shell, thus maintaining a perfect and rapid circulation over every foot of heating surface, and especially over the furnace plates, where the action of the fire is the most powerful. This incessant and powerful action prevents the deposit of sediment, and very much lessens any tendency to incrustation." A working model with glass ends was shown. The advantages claimed are great safety at high pressure, convenience in cleaning, and economy in fuel. There was also a large show of cultivators, water carts, &c., on this stand. A new cultivator or scarifier of very ingenious construction was exhibited by Craig & Clark, of Old Meldrum, Aberdeen. This implement has a circular frame, with three twisted steel cutters, all turned the same way. These may be expanded from 18 in. to 38 in. according to the nature and condition of the soil, and there are prongs on the tines for thoroughly breaking up the soil. A modification of this cultivator, to be used as a digger, has part of a circular frame, with plates or socks on the tines. Prongs attached stir up the sub-soil, while the upper prongs turn over the top-soil. The new implement is used in hop-grounds, to which it appears to be admirably adapted, but it is equally useful as a general cultivator. An improved topping and tailing machine for turnips was also shown by this firm. This machine has two thin cutting edges, which rise and fall to the size of the roots. We should require to see the implement at work before pronouncing an opinion on its merits. Corbett and Peele's royal first-prize combination of corn-winnower, elevator, and weighing-machine, although extensively used, is not in such general use as it deserves to be. Dressing, filling sacks, and weighing in one operation, it effects a great saving in labour. The "Eclipse" dressing machine, which is a part of the above-mentioned combination, has obtained eighteen Royal Society's first prizes. Messrs. Corbett and Peele also showed their circular-cam revolving mould-board plough, and a large selection of double and single-furrow ploughs, drills, grubbers, harrows, rakes, and other implements. In the competition of mowers for prizes offered by the Preston Agricultural Society at their recent meeting, 38 machines being tried, the first prize was awarded to Harrison, McGregor, and Co. We understand that the test was a remarkably good one, and that the competition was very close—so close, indeed, that the judges could not agree as to the second prize, and therefore gave medals to six exhibitors instead. Messrs. Harrison and Co. won with their old mower, and not with their new one. Both were shown at Liverpool, together with a large number of improved reapers, combined machines, chaff-cutters, pulpers, and slicers. Vertical engines, horse gears, Cambridge rollers, and harrows were exhibited by Cambridge, Parham, and Webb. In "Magic," "Invincible," and "Victor," Mr. W. A. Fell has chosen "taking" names for his steel-framed mowers and combined machines. Strangely, as we think, this maker has given up open fingers, which he declares to be of no value. We always expect to see an attractive stand under the name of the Bristol Waggon Works Company. At Liverpool the firm had a great collection of farm and trade carriages of all descriptions, American horse-rakes, winnowing machines, &c. Waggon, carts, and lorries were also shown by Hayes and Son, of Stamford, Lincolnshire, the Peterborough (1877) first prize two-

horse cart amongst them. In passing through the stand of Mr. David Hawkes, of Knutsford, we stopped to notice his new drill-harrows, offered for trial, and his liquid manure chain-pump. The "British Economical" one and two-horse drills made by Kell, Neats, and Co. were shown with the centre-action steering as at Birmingham last year. Pick and Baker's regulating-time drag harrow is a useful implement, and this, with a variety of other harrows, horse-hoes, ploughs, &c., made up a good show of cultivating implements.

In this age of change it is wonderful how well the excellent drills made by James Smyth and Sons, of Peasehall, Witham, and Paris, hold their own almost without modification. A manure distributor was also shown on this stand. A new double-furrow plough and land-presser—a useful combination on some soils—was shown by Davey, Sleep, and Co. It was exhibited for the first time at Bath. The ploughs of this firm are fitted with new adjusting share-points, for which a silver medal was awarded at Preston. A treble iron whippetree, with indicator to show when the middle horse is doing more than its fair share of work, was another novelty on this stand. Horse and hand drills and horse-hoes are the specialities of Murton and Turner, of Kenninghall. Their horse-hoes are now fitted with a wheel for adjusting depth, which gained for them a medal at the Norfolk Show last year. Perkins and Bellamy's drill is fitted with a box for drilling cloverseed at the same time with corn. They showed also water-carts, cattle-cribs, and sheep-troughs. In Preece and Son's drills we noted a new arrangement for changing barrel and cog-wheels with great facility, new leverage, and coulters. Benjamin Reil and Co. showed their patent disc broadcast sower, and a new turnip and mangol sower, adapted for sowing regularly up or down hill without change of wheels or levelling arrangements, also a hand thrasher for small holders, much used by crofters in Scotland. The new drain-cleaning rods made by this firm are jointed in a very ingenious manner; when in the drains, however sharp the turnings, the rods cannot become disconnected. Woolnough and Company's corn and manure drills and horse hoes are too well-known to need description. We did not notice any alteration in their admirable construction. In Mr. J. Coultas's drills there is a new winding apparatus. Wright's Bedford first prize potato-planter was also exhibited by Mr. Coultas, who manufactures it; also some steering horse-hoes. Denning and Co., of Chard, and Gower and Son, of Market Drayton, also showed drills of various kinds. Everything on Mr. T. Baker's stand was entered as a "new implement"; but the only person present when we visited the stand was unable to inform us wherein the novelty consisted. Ball and Son showed their Bedford first-prize waggons, ploughs, and scarifiers. W. Crosskill and Sons, of Beverley, had, as usual, a grand display of agricultural carriages of various descriptions, including portable farm railway trucks, also an "Archimedean" root-washer, reaping machine, bone mills, &c. Mr. C. Clay, of Wakefield, showed his Royal first-prize cultivators and broad shares, with horse hoes and harrows. A good selection of their well-known grinding mills, and vertical and portable engines were shown, both at rest and in motion, by E. R. and F. Turner, of Ipswich. A decided improvement in their famous chaff-cutters has been effected by Richmond and Chandler, in the form of a new reverse motion, which, with their self-feeding machine, has all the requisites of almost absolute safety. The chaff-cutter was at work in the machinery-in-motion department; and there was a large collection of machines of a similar kind, of corn-crushers, root-washers, and a turnip-pulper of new construction on the other stand of this firm. One of the largest shows of agricultural carriages in the yard was that of the Beverley Iron and Waggon Com-

pany; besides which they exhibited a new self-raking reaper (of which we can say nothing, as we have not seen it at work), their old reaper, rollers, clod-crushers, bone mills, and engines and thrashing machines in motion. To their steam engines they have fitted a new governor—the "Alert"—which is said to be so sensitive that, if the driving belt of the engine should break it would be impossible for the engine to race away. Simplicity, power, and durability are also claimed for it.

Both with machinery in motion and stationary implements Ransome, Sims, and Head made a great show. We noticed a new 6-horse power locomotive engine for agricultural purposes. The boiler is of a good length, and appears to be strongly constructed, the cylinder being placed at the fore end, and the crank shaft and gearing connected with it strongly mounted on with iron brackets firmly rivetted to the boiler. The engine has two speeds—one mile and a half and three miles per hour—and is furnished with water tank and coal bunker to hold sufficient for an ordinary journey with a thrashing machine. All the levers for starting the engine, reversing, applying the brake, and steering are close together, and well under the control of the driver. A very useful patented arrangement is also added to the main axle of the road-wheels of the engine—viz., a winding drum which can be used when the engine is stationary for drawing the thrashing machine or other load out of any very difficult places, thus making use of the whole power of the engine. One of the well-known straw-burning engines of this firm was at work, being fed with straw in the same way as a chaff-cutting is fed. Coal, wood, straw, or vegetable refuse can be used according to convenience in these engines. They are fitted with the "Automatic" governor. Messrs. Ransome's thrashing machines are now fitted with reciprocal shakers, patent self-cleaning adjustable screens, and chaff-bagging apparatus. The self-cleaning action of these screens is very ingenious and perfect. A new subsoiling plough attracted our attention. The subsoiler works in the furrow behind the horses, which thus never tread over the subsoiled work—a great advantage. We also noticed a new reversible lawn mower, a new three-furrow plough, with double lifting apparatus, and other implements with more or less recent improvements. Some engines of new construction were shown in motion by Mr. F. W. Turner, of St. Albans, one of them Turner's patent "Silent" expansive engine, with two steam-jacketed cylinders, one piston being balanced by the other. Williamson Brothers, of Kendal, showed vortex turbine and centrifugal pumps, horse gears, blowing fans, and a steam-engine.

The Coalbrookdale Company had a large assortment of garden seats, flower stands, park gates, steam-pumps, and a blowing engine. Hunt and Tawell, of Earl's Colne, showed their well-known and effective dressing machines, some chaff-cutting and horse gears with new improvements, turnip cutters, mills, &c. W. and F. Richmond, of Colne, Lancashire, had a new chain pump with wrought iron tube, very easy in working, and a large number of other pumps, water carriages, and milk tanks. Josiah Le Butt, of Bury St. Edmunds, showed his self-cleaning corn screens, malt screens, poultry and pheasant feeders, watering cans of registered pattern, malt ploughs, and other appliances, all of which are well known to the public as useful articles. Lowcock and Barr exhibited the "Emperor" mowers and combined machines, a chaff-cutter with new safety bar guard, entered for trial, and other implements. On Samuelson and Co.'s stand we noticed their new one-horse mower, "The Gem," brought out to meet the wants of farmers of small or medium farms, and those living in mountainous districts. This, and Messrs. Samuelson's other mowers and reapers, are fitted

with their patent steel and iron welded fingers. The "Omnium," "Original," "Handy," and "Eclipse" reapers were also shown, and are too well known to need description; also lawn-mowers, chaff-cutters, and turnip-cutters. Stable fittings, troughs, cribs, lawn mowers, garden chairs, ranges, &c., were exhibited in great variety by Barnard, Bishop, and Barnards, of Norwich. Bayliss, Jones, and Bayliss, of Wolverhampton, had a large stand containing fencing, cattle hurdles, field gates, tree-guards, sheep troughs, and other articles. Another assortment of the articles just mentioned was to be seen on the stand of Mr. W. H. Peake, of Liverpool, amongst which we noticed wrought iron sheep hurdles, and continuous bar cattle fencing. Frederick Orme and Co. exhibited farmyard and force pumps, bench drilling machines, &c. Wrought iron rick stands, rollers, and sheep and cattle troughs, all of excellent construction, were shown by Hill and Smith, of Brierley Hill, Staffordshire; also a large selection of gates, hurdles, wire-fencing, and netting. The "Buckeye" reaper and mower was amongst a variety of interesting exhibits on the stand of Keyworth and Co., of Liverpool. Steam-engines, farm carriages, horse-rakes of American pattern, chaff-cutters, milk tankards and carriages, weighing, mangling, and washing machines, and various other requisites of the farm, garden, and farmhouse were shown by the same firm. Francis Morton and Co., of Liverpool, had a fine show of wire and iron fencing in all its varieties, iron gates, iron roofing, steam plough ropes, lightning conductors, &c. A new potato-digger, a potato separator, a potato washer, dressing machine, and meat safes were the most prominent exhibits of Penney and Co., of Lincoln. We noticed a galvanised iron shepherd's house and dog kennel on Mr. A. E. Peirce's stand. J. G. Rollins and Co. showed the improved "Archimedes" lawn-mower, one of the most effective machines ever introduced, and a number of other American implements and tools. A large show of French burr millstones, "Economic" wheat cleaners, a middlings purifier, and other millers' requisites was made by William R. Dell and Son of Mark-lane, London. We noticed some new shelter poultry coops shown by Reynolds and Co., of London. Millers' requisites of various kinds were exhibited by Davies and Smeade, of Liverpool. Mr. H. Denton, of Wolverhampton, had a good show of chain and other harrows. A new self-acting horse-rake, and a new combined sack-lifting barrow, loader, shooter, holder, and weighing-machine were exhibited by Tooley and Co., of Dunstable. In working the rake the driver has merely to touch a sliding bolt with his foot, which passes into a clutch on the travelling wheel, and as the horse moves forward, pulls over the teeth. When arrived at the required height, a projecting piece of iron strikes the bolt, withdrawing it from the clutch, and causing the teeth to fall into position for raking. No strain is put upon either the man or the horse, as the teeth are so evenly balanced that the slightest pull causes them to tip and empty their load. By a new patented arrangement the rake is firmly locked in its work. A lever is attached behind, to deliver the load when walking. A new corn and seed separator, with self-acting arrangements, was shown by Mr. J. L. Catchpole, Steatham, Larkworthy and Co., of Worcester. We noticed at Bath the admirable adaptations in stable fittings manufactured by the St. Pauls Ironworks Company.

Barford and Perkins made a notable show both in the stationary and machinery-in-motion departments. Their steam engines and cultivating machinery are well known. They showed a new 7-tined cultivator, fitted with a new self-acting appliance of lifting the tines out of the ground when at work without stopping the engine. The imple-

ment is lifted by means of a crane, placed under the easy control of the driver. Messrs. Barford and Perkins showed also a large assortment of their prize grinding, crushing, and cake mills, steaming apparatus, rollers, clod crushers, asphalt rollers, &c. Their steam cultivating machinery was at work in a field near the show-yard.

Passing by many stands of greater or less interest to farmers and other visitors, bearing in mind that it is simply impossible to notice all, we come to one of the largest stands in the yard, that of J. and F. Howard, of Bedford. As in the case of several other large manufacturers of reapers, the first entry in Messrs. Howard's list was a patent sheaf-binder. This invention is one to bind with string or rope-yarn, but it is not yet perfected sufficiently for exhibition, although it is to be tested in the trials to be held near Liverpool in harvest-time. The "Farmer" engine and a double set of steam-tackle were at work in a field near by, but we were unable to leave the showyard to see these and other steam cultivators at work. The "Farmer" engine has been improved by the perfecting of the coiling apparatus. Beside the engine we noticed a pair of 8-horse engines for cultivating purposes, a number of self-lifting and turning cultivators, a self-moving disc anchor, and a set of round-about tackle, adapted for great celerity in setting ready for work. There were also two-wheel steam ploughs, a steam cultivator for sugar beets, which will plough and subsoil to a depth of thirty inches, used chiefly in France, other ploughs of from two to six furrows, steam harrows, scarifiers (one 9ft. 6in. wide), and a large selection of horse-ploughs, harrows, and cultivators. Amongst the ploughs we noticed a convertible double plough, easily made into a single-furrow plough by detaching one of the beams. The beams are of steel, tapering both ways, and are fitted with new patent slide standards for altering depth of ploughing. The "Simplex" reaper, noticed at Bath, was shown at Liverpool with six rakes for swathing barley. The "Simplex" mower was one of the six which obtained a silver medal at the Preston Show. Some important improvements have been made in the fittings of Messrs. Howard's horse-rake. The fingers can be easily taken out and straightened, and there is a new arrangement for the pitch of the teeth. Amongst the other numerous exhibits on this stand we noticed the central-action hay-maker, and new steel chain harrows. Aveling and Porter showed their well-known locomotive engines, with double-riveted boilers, having the side-plate all in one piece, locomotive-waggon, and steam-roller. Newton Wilson and Co.'s sheep-shearing machine we noticed at Bath as a great requisite of the present time, but too high in price for the ordinary flockmaster. They also showed their patent horse-groomer, which is now well-known. Waite, Burnell, Huggins and Co. had a large show of their "Excelsior" lawn mowers, which we saw worked, and praised, at Bath.

We now come to one of the principal novelties of the show—Captain M. T. Neale's patent sheaf-binding apparatus. This is a beautiful and very ingenious piece of mechanism, and, if not too complicated for field use, it looks like doing its work with great effectiveness. It ties with string in a tight knot—a very great desideratum. The apparatus was attached to one of Samuelson's reapers, and its method of working is as follows:—A hooked rake, having its centre above a concave platform, attached to the ordinary platform of the reaper, sweeps the corn up to two guides. Then an arm, having at its end a pair of pincers, carries a string round the sheaf. Before the arm has completed its revolution two loops are formed in the intermediate portion of the string, and a tube advances through them. Inside the tube are grippers which seize the free end of the string, already

carried forward by the arm, and draw it into the tube. A small plate, called a "pusher," which passes freely over the tube, then forces the two loops off the tube on to the string already carried round by the armed pincers. Simultaneously with the action of the pusher, a tension bar advances and draws the two loops tight. The armed pincers then seize the string again, and cut it above the knot, at the same time retaining hold of the string ready for the next operation. The rake then recedes, the hook guides fall, and the sheaf, tied with a double reef knot, drops to the ground. Of course this operation, which takes so long to describe in detail, is the work of a moment. To suit straw of different lengths, the whole tying apparatus can be shifted to and fro on the fixed frame of the machine by means of a hand wheel and screw. All the motion is transmitted by one shaft from the reaper. The whole apparatus, as shown at Liverpool, was patched by numerous alterations, and its appearance was naturally that of an experimental machine. When re-made it will have a much simpler and lighter appearance. The whole machinery is the most compact of any of the sheaf-binders which we have yet seen. It is to be tried at harvest.

Holmes and Sons, of Norwich, showed thrashing machines which separate corn, seeds, &c., and bag the chaff, a portable steam-engine, corn, seed, and manure drills, hand-drills and dressing machines; also their prize horse-hoes and turnip-thinners.

A new agricultural locomotive engine was exhibited by J. and H. McLaren, of Leeds. This engine is supplied with a new expanding arrangement by which the boiler is allowed to contract and expand without throwing any strain on the machinery, which is quite independent of the boiler. The new principle consists in a saddle bolted to the top of the boiler instead of holding the cylinder direct. The cylinder has a dove-tail on its bottom side that slides in the saddle, and the strain of the engine is taken up by the wrought-iron frame plates. Another new feature is an improved spring for keeping the driving pin from working out when ascending a hill.

An American hay-loader, new to this country, was shown by Alfred Field and Co., of Liverpool. It is a light, useful looking piece of machinery, which can easily be attached to the hind part of a waggon. The horses walk on either side of the row of hay, and the loader elevates it into the waggon as it travels along. The implement has been used for two or three seasons in America. It is so light in draught that one can easily draw it a short distance by hand. Messrs. Field and Co. also showed "Buckeye" reapers and combined machines, and a selection of American churns and tools.

John Fowler & Co. had at work in a field near the show-yard a steam plough, a cultivator, a digger, and harrows. This field, like others spoken of as "near the show-yard," was really at too great a distance for those to visit who were not specially interested in steam cultivation more than in other things to be seen at Liverpool. On Messrs. Fowler's stand we noticed several specimens of their excellent engines for cultivating purposes. These engines are so familiar to the readers of *The Mark Lane Express* that it is quite unnecessary to describe them, but there are a few new features in their construction which may be noted. One of these is the extensive use of steel in the machinery, shafts, gearing, and in most of the boilers, the object being to increase the strength and durability of the parts most exposed to wear or breakage. Another new feature is the exclusive use of single-cylinder engines, by which a saving in fuel and a gain in power are effected. Wrought-iron crank-shaft brackets are also now used in all the engines used for steam cultivating. The ploughs and diggers are made entirely of wrought iron, malleable iron, and steel, only the shares being

of chilled cast-iron. An arrangement for altering the width of furrow with the least possible trouble, and without sacrificing the rigidity, has been adopted in the shape of a patent attachment of the skife to the frame by means of a wedge slipped underneath the second skife-head, which presses the hind-end of the skife out as far as required. An implement of novel construction, known as the "Sutherland" plough, is strongly recommended for breaking up waste lands, especially moors in which roots and large stones have to be torn up. A discer is used after the last-named implement in cases where the ordinary plough cannot be worked with advantage. This implement consists of two or more shafts carrying revolving discs, similar to but larger than revolving cutlers; and placed at a considerable angle to the direction in which the implement travels. They are attached and pulled by a steerable main frame, and the effect is a rough turning-over and mixing of the soil, which at the same time it levels to a certain extent, so that subsequently ordinary ploughs can be used. Messrs. Fowler now make a new class of traction engines, for use on rough roads and irregular ground, their chief peculiarity being the great size of the hind wheels. One of these was shown at Liverpool with a crane attached. They are intended for work in arsenals and engineering establishments, as well as in the field and on the road. These engines are very strongly constructed. Other novelties in waggons, water-carts, &c., were to be seen on the stand, but we are unable to give space for a description of them. It should, however, be remarked that Messrs. Fowler now make steam cultivating machinery to work on four distinct systems: 1, the double engine system; 2, the clip drum system, in which a self-moving anchor is substituted for one of the engines used in the double system; 3, what may be termed the winding-drum system, in which, instead of the clip-drum, the engine (which may be kept out of the field if desirable) is provided with two winding drums, alternately coiling and uncoiling their wire rope; 4, the roundabout system.

Another well-known system of steam cultivation is that of Finken and Co., a set of which was fixed and put in motion in the Show-yard. We did not notice any important novelties in the engine or implements. The balance plough is fitted with steel skifes and mould-board, and the cultivator has an improved turning apparatus. The engine is erected on a strong cast-iron frame, distinct and separate from the boiler.

One of the most striking novelties of the show was the "Hydrotrophe," exhibited by Hodgkin, Neuhaus, and Co., of London. This is a new boiler feeder on the "Pulsometer" pump principle, and it was being tested by the judges when we were present—with what result our readers saw last week. Messrs. Hodgkin and Co. have received for it one of the three silver medals awarded for merit in new inventions. The "Pulsometer" was also shown at work on this stand. It is now widely known as the best pump ever invented for use in difficult situations. It is also adapted for raising sewage, mud, &c., from deep tanks or sewers, and for a ship's pump. Self-indicating weighing machines, fitted with oil retainers, were shown by David Hart and Co., of London. Weigh-bridges, weighing machines, and scales were to be seen in great variety on the stand of Henry Pooley and Son, of Liverpool. We noticed also a novelty in the form of a triple-revolving steelyard, weighing in English, French, or Spanish weights, according to which edge is turned upward. It can equally well be graduated to the weights of any other nation.

King and Bamford's patent sheaf binder was exhibited by Mr. H. J. H. King, of Newmarket. This machine binds with string, the ends of which it twists several times by way of fastening. We are of opinion that the

ordinary twine used will not keep tight by this mere twisting, though tarred string possibly might. The sheaf is carried off the platform by a reciprocating rake working under the platform and through slits in it when raking the corn. The corn is thus brought up to a twister, which comes over the sheaf, and twists the string several times, after which the string is cut, and the sheaf is thrown off at the side of the machine. M'Cormick's sheaf binder, which was shown on the next stand, is one of several wire binders now before the public, against which a strong prejudice exists in this country, though in America it has quite subsided. The objection to wire is, we fear, ineradicable in a country like this, where so much straw chaff is used in the feeding of cattle. In this machine the corn falls on to a conveying web platform, and is taken up by a double canvass elevator to the binding platform on one side of the machine, where it is bound with wire by an arm passing over the sheaf, the wire being twisted by means of a small-toothed wheel. The machine is fitted with a new adjustable reel, by means of which the machine can be worked high or low according to the condition of the crop. This is a new feature in the M'Cormick harvester, which has been worked in America for, we believe, two harvests as a sheaf binder. Another sheaf binder is, we believe, in preparation by Messrs. Hornaby and Sons, whose stand we next inspected, but it is not to be shown till perfected. Hornaby's "Spring Balance" reaper has been improved by the introduction of new gear for raising or lowering the cut, and for controlling the rakes, all being placed within easy reach of the driver, so that he can alter the height of cut, as well as the rake delivery, without leaving his seat. We noticed, also, a one-horse self-delivery reaper which we have not seen before, though it was worked in the trials succeeding the Birmingham Show last year. We noticed, also, a new wood plough, both single and double furrow, the beam of which is cased with iron, thus rendering it both lighter and stronger than the ordinary ploughs. There was a great show of other ploughs, mowers, reapers, turnip pulpers, &c. Messrs. Hornaby also exhibited their steam engines and thrashing machines in the machinery-in-motion department.

Mr. Walter A. Wood's harvester and sheaf-binder has been improved since it was shown at Islington, where we noticed it, but what the improvements are the person in charge either could not or would not state. As the ever-courteous Col. Griffin was engaged at the time of our visit, we had to hurry on without ascertaining what the alterations were. We need hardly say that the machine binds with wire, and that it has been used with great satisfaction in America, over a thousand of the machines having been worked in that country last harvest. To obviate the objection to wire bands as far as possible, shears, specially prepared, are supplied for cutting the wire, and at the same time holding and drawing it from the sheaf, so that only through carelessness the wire can pass into the thrashing machine. "But even should this occur," Mr. Wood insists, "testimonials amply prove that there is no objection to the wire, either on the score of thrashing or of injury to the stock when left in the straw. The objections to the wire have been utterly exploded by the most positive proof. Wire bands are less objectionable in thrashing than straw bands, and cattle will not eat wire." Wood's reapers and mowers, which were shown in their usual variety, need no special notice, as they are unaltered in construction since last year. Osborne and Co., of Liverpool, showed "Kirby" and "Wheeler" mowers and combined machines, amongst which was a new "Wheeler," as a mower only. Another wire-binder was shown by this firm. The grain falls upon an endless apron, which conveys it to the binder, where it is securely caught, the wire carried round, cut off, and twisted. The

driver, with a foot treadle, can bind any size sheaf required. It was awarded the Grand Centennial Medal and Diploma at the Philadelphia Exhibition. The Albion Ironworks Company had a great show of chaff-cutters, pulpers, mills, &c., some being in motion; also a horse-rake with a new self-acting gear of a very ingenious description, and a new arrangement for altering the pitch of the teeth. Hunter's "Excelsior" double drill turnip-topping, tailing, and raising machine we noticed last year at Birmingham, but it has since been improved by an arrangement for regulating the height of cutting off the tops of the roots. Woods, Cocksedge, and Co., of Stowmarket, had a large number of chaff-cutters with latest improvements, mills, carts, horse gear, and elevators. The elevator is Nickerson's patent, of which the speciality is that the horse gear is fixed to the travelling frame—a great advantage. Pickesley, Sims, and Co. made a good display with their reapers, mowers, horse-rakes, chaff-cutters, pulpers, and mills. We noticed a new 2-horse combined back-delivery machine, which dispenses with a cross-shaft, and uses intermediate gear to transmit motion from main wheel. The bone mill of this firm, shown in motion, received a medal at Preston.

Mr. C. S. Jeffery, of Stamford, showed a haymaker fitted with new patent hood to prevent blocking, and some chaff-cutters made with wrought angle-iron legs, and wrought frames; also some vertical and portable steam-engines. W. N. Nicholson and Son had a new pattern engine and boiler with inverted cylinder, an improved twisting engine shown in motion, and a large number of their horse rakes, rollers, mills, &c. A great show of wrought iron cisterns, cattle and sheep troughs, liquid manure tanks, and bins was made by Burney and Co., of London. Cattle feeders, a farmyard manure spreader, and an artificial manure sower, were exhibited by Mr. R. Willacy, of Preston. Henry Bamford and Co., of Uttoxeter, had some improved chaff-cutters, mills, and pumps. A new patent for gearing providing for two lengths of chaff, stop, and reverse motion, all on fly-wheel shaft—thus saving power—has been obtained by John Williams and Son, of Rhyl. This chaff-cutter was shown in motion. We noticed also a new horse gear, the main wheel of which forms a dome, covering all gearing. Mr. Benjamin Edgington, of London, had a tasteful display of such garden requisites as tents, tents and umbrellas combined, and garden seats; also, sheep and rabbit netting, waggon cloths, rick cloths, &c.

In the machinery-in-motion department we have already noticed such exhibitors as had also had stands in the stationary implement department; but several are not included in that category. Amongst these we must mention Messrs. Clayton and Shuttleworth, of Liscals. We noticed with interest their patent drum-guard and self-feeder for thrashing machine, which was subsequently awarded a silver medal by the judges. Their machines are now fitted with chaff-bagging apparatus. They showed also a corn elevator, a portable engine with new under-carriage, a traction engine with patent steering, which keeps segments always level with worm gear, and some new lifting jacks. W. Tasker and Sons showed a thrashing machine with safety self-feeding apparatus and a sheaf-band cutter. The agricultural steam-engine of Marshall, Sons, and Co., of Gainsborough, are now made with the boiler entirely independent of the engine, so that it can readily be removed for examination or repair. With this object in view they have provided their engine with a complete frame, this frame carrying the cylinder, the plunger blocks for the crank-shaft and counter-shaft, the bearings for the driving axle, the forecarriage, the water tank, coal bunkers, &c., while the boiler, which is fixed to the cylinder at the smokebox, and is at the firebox end merely connected to the frame by brackets, which slide

on the frame and thus allow the boiler to expand freely. The frame consists of a pair of frame plates suitably connected by transverse stays, the cylinder being fixed to these frame plates at the front end under the smokebox. Other advantages of their engine, which want of space forbids us to mention in detail, can be fully appreciated by practical engineers. One of their thrashing machines was fitted with a patent self feeder, band cutter, and chaff-elevator. They showed also an elevator on the turnover principle, a saw bench, a rack-lifting barrow, and two screw-jacks.

An engine with a water tank fixed to it was exhibited by Ruston, Proctor, and Co., of Lincoln; also, Loader's patent haymaker and loading machine, improved since last year. Portable and vertical steam-engines, thrashing machine with Penney's screen, elevator, horse gear, and portable circular-saw and boring bench were shown by W. Foster and Co., of Lincoln. A new drum-guard shutting over the drum by the action of a spring, was fitted to Mr. E. Humphries's thrashing machine. W. Houghton and Co. had a number of their "Victoria" aspirators, separators, and smutters; also, a new combined offal and middlings separator, and a new middlings dusting purifier. A very useful combination is the chaff-cutter and corn crusher shown by J. Crowley and Co., of Sheffield, and their safety lever chaff cutter (Edwards's patent) deserves notice. R. Garrett and Sons, of Saxmundham, had, amongst a number of engines and thrashing machines, one of the latter fitted with Grimaldi's patent straw chopping apparatus, very useful in preparing straw for cattle fodder. They showed also an improved firebox for portable and locomotive engine boilers, with corrugated crown plate, supported by tubes and front plates flanged to receive and support the corrugations of the crown, by means of which the necessity of crown-stays is entirely dispensed with, the heating surface of the boiler greatly increased in measurement and efficiency, and an increased durability ensured both in consequence of the freedom for expansion afforded by the corrugations, and of the process of manufacture by means of which every flange is perfected in a single and moderate heat. Garrett and Sons' straw-burning engines (on the Paul Kotz principle) have a preliminary heating chamber or hopper, in which the straw is dried and heated previous to combustion. The drills and dressing machines of this firm need no description.

A novelty in traction engines was to be seen on the stand of Charles Burrell and Sons, of Thetford. This consisted of a winding-drum affixed to the hind axle of a traction engine, useful for several purposes, such as hauling a thrashing machine or any other heavy object out of a boggy place or a ditch. This combination obtained a silver medal from the Norfolk Society at the recent Show at Diss. Messrs. Burrell also exhibited a double-blast thrashing machine fitted with patent adjustable corn screen for finishing the corn for market. Robey and Co., of Lincoln, showed their traction and portable engines, their patent iron frame thrashing machine fitted with adjustable corn screen and machine adjuster, and an improved method of driving the shoes, which is said to effect a saving in power; also a circular-saw bench, horse gear, and corn grinding mill. Tuxford and Sons, of Boston, exhibited their "coal saving" and double cylinder portable engines, a combined thrashing and finishing machine, and centrifugal pumps, which discharge from 350 to 3,200 gallons of water per minute. Taseye Brothers showed engines, steam pumps, air pump, and steam fire engines; and Appleby Brothers had some steam cranes and hoisting engines, steam pumps, and condensing engines. Messrs. E. S. Hindley had a show of small vertical engines, a hand sawing machine, hoisting engine, &c. Riches and Watts exhibited their well-

known engine, mills, and a new revolving hay and gathering rake. Barrows and Stewart had specimens of their portable and vertical engine, thrashing machines, steam cultivators, porters, and anchors. Davey, Paxman, and Co., of Colchester, showed their excellent portable and vertical engines; and Nalder and Nalder exhibited thrashing machines. A portable hoisting engine, noticed at Bath, was in Brown and May's stand, with other steam engines. Also noticed in our Bath report was the new traction engine invented by Mr. W. Box, of Uffington, Berks. Hempsted and Co., of Grantham, had a great show of vertical engines; and Corcoran, Witt, and Co. a large number of mills of various kinds, corn screens, and other exhibits.

In these days of meat-preserving, Siddeley and Company's patent ice-making machine by means of the evaporation of ether in vacuo is worthy of notice. Two tons of block ice can, it is said, be made in twenty-four hours by the machine they exhibited. They also showed a model of their cold chambers for preserving meat, milk, fruit, and other perishable articles; also a feed-water heater. On the stand of Samuel Corbett and Son, of Wellington, Salop, we noticed a new pattern grinding mill, a new combined potato raising and pulverising plough, and a variety of root pulpers, strippers, oilcake breakers, a revolving fork, and a new land roller.

Passing over many stands that space forbids us to notice, we must not neglect to mention the exhibition of Priestman and Company's self-acting bucket and fork. Quite a crowd was collected round the enclosure in which this useful invention was at work, raising and unloading corn, sand, manure, and coal. We described the working of this contrivance some short time back in *The Mark Lane Express*, and it has now become so widely known that we need not recapitulate. The perfect ease with which the steam engine and machinery worked by one man did what it was intended to do, excited the admiration of all on-lookers. The filling of the coal seems not to be at present perfectly arranged for; but we have no doubt the difficulty at present felt will be speedily overcome.

No doubt we have omitted to notice many exhibits that deserved attention. In some cases the attendants at the stands were absent or engaged, and important machines or appliances may easily have escaped attention in the hurry inevitable in the case of such an enormous collection of miscellaneous articles as was shown at Liverpool. The numerous stands of road carriages we have not even attempted to notice, although they were only too attractive in these "hard times" for farmers. We do not know in what respects the exhibition of miscellaneous articles is limited by the Society. Certainly there are many articles shown which are not specially agricultural. One of our contemporaries has taken special exception to a show of china and crockery; but the china shop certainly contains many articles indispensable in the dairy and the farm-house, and we are not aware of any reason why it should not appear at an agricultural exhibition which allows carriages, sewing-machines, and washing-machines to be placed in its yard in great profusion.

THE PIGS.

The exigencies of time and space prevented us giving our report on this department of the Show in our last number. As we then remarked, the classes were tolerably well filled, although the numbers were not so great as at Birmingham last year by 68 entries. It must be confessed that the quality was not such as we have seen in former years at the Royal meetings. All the large breeds are too big for general utility in the present day. The taste for fat bacon is fast dying out in this country, and our American cousins are not slow (are they ever slow?)

to note this, and send us just that which suits demand—small, mild-cured, thick-fleshed bacon, to which there is not a particle of waste. Yet in England the old system still lingers on, and large coarse pigs are bred, although the superiority of smaller bacon has been clearly proved. In the class for boars above six and not exceeding twelve months old, of the large white breed, the prizes are withheld for want of merit; the one-half of the entries are disqualified on account of their ages, and had this not been so there would still have been but little merit in the class, although the exhibits are from breeders who take the bulk of the prizes in other classes. The Earl of Ellesmere, Mr. Duckering, and Mr. Peter Eden are the chief breeders of this kind of pig. The old boars are a rather better lot, the Earl of Ellesmere being first, and Mr. Duckering second; the Earl taking the reserve number. The three breeders above mentioned make a good fight with their young sows; there is nothing like "pens of three of the same litter" to try resources, and this class is perhaps the most useful of all. More credit is due here, and the Earl of Ellesmere took first and second honours; the reserve number, with a high commendation, falling very deservedly to Mr. Godfrey. The older sows are not extraordinary, and again the Earl of Ellesmere is both first and second, the reserve number and high commendation falling to Mr. Peter Eden. The small white breed is far more to our mind; they are fit to eat, and their hair betokens a fair amount of hardihood. Next to Berkshires this breed of pigs are probably the best in the country. With the young boars there was the usual bother in respect of dentition; the Earl of Ellesmere, first; Lieut.-Colonel Cook, second; and Mr. Nicholson, reserve number. With old boars the Earl again first, and also second, Mr. Duckering reserve number, and highly commended for a very nice pig, and Mr. Wilson obtains a commendation.

With pens of three breeding sows of the same litter the Earl of Radnor is first, Mr. Lockwood second, and the Earl of Ellesmere reserve number; these are the only exhibitors in this class. With old sows Mr. Duckering obtains first honour, and the Earl of Ellesmere takes the rest.

With the small black breed Mr. Sexton's star is in the ascendant, but the entries are very few. The Berkshires are strong in the old boar class, where Mr. Hower is the winner. Mr. Ackers is the only exhibitor with pens of three breeding sows and the judges very fairly awarded him the first prize; it is easy to show an old boar or an old sow, but a pen of three out of the same litter is what the committees of agricultural meetings would do well to encourage by special prizes. With old sows of the Berkshire breed Lord Clermont has it nearly all his own way, and the animals are very creditable. The "other breeds" call for no comment.

SEEDS, ROOTS, MANURES, &c.

Foremost in this department we must notice the magnificent stand of Messrs. Sutton and Sons. The improvements in the external formation and decoration of this handsome moveable edifice we noticed in our report of the Bath Show. In the internal management of their stand Messrs. Sutton carry tasteful management to the extent of something approaching to fine art. They had a splendid collection of big roots of last year's growth, in a capital state of preservation. Their Berkshire prize, Mammoth Long Red, and Golden Tankard mangels were all well represented, and not only in last year's growth, but also in that of the present season, some very forward specimens of the latter being exhibited. We were especially pleased with their specimens of giant and rapid-growing grasses of various kinds, all in pots; also with their Prickly Cornfrey, and Thousand-headed Kale. Their dried specimens of grasses formed a

museum that a botanist might spend days in with pleasure and instruction, and their collection of annual flowers must have delighted all gardeners. Models, seeds in great variety, and silver cups offered for competition at different shows this year, amounting in value to upwards of £500, completed an excellent show. Another very tasteful stand of seed-corn, specimens of trees, shrubs, and roses, natural and cultivated grasses, and garden seed, was that of James Dickson and Sons, of Chester. Edward Webb and Sons, of Wordsley, Stourbridge, also made a grand show of seed-corn of various kinds, roots, farm and garden seed, and potatoes. W. and H. M. Goulding, of Dublin, Morris and Griffin, of Wolverhampton, Ohlendorf and Co., Farmer and Co., the Phospho-guano Company, Newton, Keates, and Co., and Proctor and Rylands, showed their well-known manures of various kinds. Day, Son, and Hewitt exhibited specimens of their famous cattle medicines. The Driffield and East Hiding Cake Company, and Messrs. Matthews showed their respective products; and cattle food and condiments were exhibited by their several manufacturers.

CHEESE AND BUTTER.

There was an increase in the number of entries in the show of cheese and butter as compared with that of Birmingham; but, as a national show, we cannot consider it satisfactory. Certainly it does not take the place recently filled so well by the National Dairy Show, which we are glad to see is to be held again this year. There was, however, a good show of cheese at Liverpool, and a fair show of butter.

IMPLEMENT EXHIBITORS AT THE LIVERPOOL SHOW.

The following is an alphabetical list of the Implement Exhibitors at Liverpool, with the numbers of their stands:—

	<i>S'and.</i>		
Adams, M. ...	81	Bell and Co. ...	183
Adamson, B. ...	144	Bellamy, J. ...	233
Aggio and Stidolph ...	3	Bennett Brothers ...	65, 294
Agricultural and Horticultural Association (Limited) ...	392	Bennett and Son ...	119
Albion Iron Works Co., ...	226, 280	Bentall and Co. ...	9
Alexanders and Loveridge ...	240	Bettyr, James ...	411
Allechin, W. ...	328	Beverley Iron & Waggon Co. (Limited) ...	59, 228
Alcock, T. ...	10	Blair and Mackenzie ...	400
American Motor Co. ...	311	Bligh Brothers ...	132
Anderson, Abbott, and Anderson ...	206	Boby, R. ...	8
Appleby Brothers ...	302	Bone, W. ...	4
Arnold and Sons ...	169	Boulton and Paul ...	428
Ashworth Brothers ...	330, 405	Bowden, W. ...	139
Atkinson Brothers ...	52	Box, W. ...	320
Atmospheric Churn Co. ...	255	Byall, R. J. ...	143
Aveling and Porter ...	150	Bradford, Thomas, and Co. ...	199, 366
Ayres, Chambers, & Ayre ...	386	Braggins, G. F. and H. ...	81
Bagnall, W. G. ...	365	Brainby and Son ...	122
Baker, J. ...	6	Bramham, J. ...	246, 415
Baker, T. ...	50	Brickell, W. ...	69
Ball, G. ...	71	Bristol Waggon Works Company (Limited) ...	28
Ball, W., and Son ...	63	Broadbent and Son ...	341
Bamford and Sons ...	248	Brookes and Co. ...	2
Bamlett, A. C. ...	193	Brooksbank and Watson ...	194
Barford and Perkins ...	116, 324	Brown, B. and J., and Co. ...	102
Barford, V. T. and V. ...	18	Brown and May ...	310
Barnard, Bishop, and Barnards ...	84	Bruce, A. K. ...	347
Barr and Company ...	385	Burgess and Key ...	14
Barrows and Stewart ...	307	Burney and Co. ...	215
Bateman and Co. ...	326	Hurrell, C. and Sons ...	287
B-yllis, Jones, & Bayliss ...	85	Bush and Co. ...	137
Beach and Co. ...	191	Cambridge, Parham, and Webb ...	25
		Campbell and Brightman ...	312
		Carson and Towne ...	11

Stand.		Stand.		Stand.		Stand.	
Carter, Brothers ...	351	Boiler Co. ...	315	Le Gros, Mayne, Leaver, and Co. ...	354	Perry, P. J. ...	426
Casell, Potter, & Galpin ...	388	Gibbons, P. and H. P. ...	806	Lewis, G. and Son ...	16	Pettifer, S. ...	171
Cawdy, John ...	153	Gild Brothers ...	114	Lewy, F. ...	317	Phillips and Co. ...	216
Chapman, J. L. ...	111	Gold, H. ...	125	Linnere, R. and J. ...	162	Phillips, C. D. ...	27
Cheavin, George ...	178	Goulding, W. and H. M. (Limited) ...	369	Llewellyn and Son ...	254	Phoenix Oil Mill Co. ...	394
Chapman, Richard ...	22	Gundry and Co. ...	177	Lloyd, H. ...	121	Phospho-Glano Company (Limited) ...	577
Clark, William ...	164	Gower and Son ...	48	Lloyd, T., and Sons ...	74	Pick and Baker ...	32
Clarke's Crank Co. (Lim.) ...	352	Gray and Co. ...	230, 415	Loader, C. ...	427	Pickering, J. ...	318
Clay, C. ...	56	Greene and Sephton ...	183	Lowcock and Birr ...	79	Pickley, Sims, and Co. (Limited) ...	237, 277
Clayton & Shuttleworth ...	262	Gresham and Craven ...	325	Lyon, A. ...	77	Piggott Brothers ...	143
Caulbrook Dale Co. ...	72, 367, 407	Groat, J. ...	181	Main, A. and J., and Co. ...	247, 419	Pinfold, J. D. ...	343
Coleborn and Sons ...	68	Hadfield and Co. ...	379	Main, R. ...	135	Pinnock, J. B. ...	136
Coleman and Morton ...	20	Hancock, F. and C. ...	75	Maldon Iron Works Co. (Limited) ...	5	Plant, G. W. ...	389
Coeb, Henry ...	7	Harker, D. ...	30	Maraden, H. R. ...	338	Potter, T. G. ...	104
Couper and Sons ...	154	Harlow, B. ...	318	Marshall, Sons, and Co. (Limited) ...	264	Pooley, H., and Sons ...	212
Corbett and Peele ...	23	Harrison, M'Gregor, and Co. ...	24	Marston, J., and Co. ...	137	Powis and Co. ...	334
Corbett, S., and Son ...	358	Harrison, Teague, and Birch ...	219	Mathey, B. and S. ...	339	Prece and Sons ...	41
Corcoran, Witt, and Co. ...	323	Hart and Co. ...	211	Mathews, F. C., Son, and Co. ...	188	Priestman Brothers ...	409
Cutlam and Co. ...	107	Hathaway, G. ...	253	Mathews, J. ...	152	Proctor and Ryland ...	381
Cutrell and Co. ...	270	Houghton and Thompson ...	233	Mattison, F. and H. ...	17	Reinforth, W. and Son ...	44
Coulas, J. ...	46	Hayes and Son ...	29	May and Co. ...	223	Randall, F. and H. ...	61
Cowan Patents Co. (Limited) ...	295	Haynes and Jafferis ...	746	Maynard, R. ...	322	Ranomes, Sims, and Head ...	60, 297
Craig and Clark ...	21	Haynes and Sons ...	151	McCormick, C. H. ...	215	Reading Iron Works, (Limited) ...	220, 283
Craspin and Luck ...	417	Hayward and Co. ...	92	McKenzie, T., and Sons (Limited) ...	61, 293	Reeves, R. and J., and Son ...	43
Cromhill and Sons ...	54	Hayward, Tyler, and Co. ...	361	McLaren, J. and H. ...	200	Reid, B., and Co. ...	42
Crowley and Co. ...	279	Hempstead and Co. ...	321	Mee, F. and J. ...	231	Rendle, W. E. ...	423
Crowther and Co. ...	313	Hepburn and Gale ...	208	Milford, F. P. ...	63	Reynolds and Co. ...	100
Crump, H. S. ...	239	Herts and Co. ...	402	Milford, T., and Son ...	82	Reynolds, F. W., and Co. ...	335
Darlin, W. ...	391	Hett, C. L. ...	408	Michell Emery Composition Wheel Co. ...	319	Riches and Watts ...	345
Davey, Paxman, and Co. ...	308	Hill and Smith ...	89	Mold, W. H. ...	173	Richmond and Chandler ...	57, 299
Davey, Sleep, and Co. ...	388	Hilton, W. H. ...	160	Morgan and Co. ...	283	Richmond and Norton ...	58
Davies and Smeade ...	108	Hindley, E. S. ...	304	Morris and Griffin ...	370	Richmond, W. and F. ...	76
Davis and Co. ...	399	Hodgkin, Neuhaus, and Co. ...	205, 285	Morton and Co. (Lim.) ...	94	Roberts, J. ...	133
Day and Sons ...	166	Holmes and Sons ...	186, 363	Moss and Son ...	332	Robey and Co. ...	248
Day, Son, and Hewitt ...	170	Hop, W. A., and Sons ...	395	Moule's Patent Earth Closet Co. (Limited) ...	227	Robinson, J. W. and Co. ...	235
Deceville and Co. ...	202	Horley, M. E., and E. ...	424	Mulliner, F. ...	121	Robinson and Richardson ...	252
Dellano and Co. ...	159	Hornsby, R., & Sons ...	231, 283	Murray and Co. ...	234	Ro'line and Co. ...	97
Dell and Son ...	99	Houghton and Co. ...	371	Murton and Turner ...	39	Ro'line, Draw, and Co. ...	353
Deving and Co. ...	47	Howard, J. ...	383	Musgrave and Co. (Lim.) ...	106	Royal Veterinary Cattle Food Co. ...	189
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HAY FEVER.—Hay fever is prevalent at this season of the year in many districts, and, if not a malady of the most serious character, it is nevertheless an exceedingly troublesome and unpleasant one; and in the interest of those who are liable to it—and they are very numerous—a discovery which two Continental professors appear to have made between them cannot be too generally known. The victims of this curious epidemic can never venture into the sunshine or get heated by exercise between about the middle of May and the end of June without an attack of violent sneezing, inflammation of the nose, severe headache, and general depression—in short, all the symptoms of a most distressing cold. Prof. Helmholtz observed that the malady was invariably characterised by the presence of very minute infusoria, not unlike the queer little creatures that we sometimes see in rain-water butts, only very much smaller. These he found sticking most tenaciously in the cavities and recesses of the nose, and he noticed that at low temperature they were very sluggish and inactive, and woke up, as it were, when they were warmed. Here, then, was the secret of the disease; but it was Professor Binz whose investigations suggested the remedy. He found that infusoria might be poisoned by quinine, and of this fact Helmholtz availed himself in his treatment of hay fever, and from which he himself had been a sufferer in the early summer for 20 years. The learned professor made a very weak solution of sulphate of quinine, and laying flat on his back with his head down, he poured a little of it into each nostril, and found instant relief. By occasionally repeating the operation he completely routed the enemy, who, in spite of all his efforts to prevent them, had for so many years thus audaciously taken up their summer quarters, not merely under his very nose, but in it. By this means he could, he found, enjoy entire immunity even in the hottest weather and during the greatest bodily exertion. The remedy is a cheap and simple one, and ought to prove very valuable to those whom this queer affection deprives of half the pleasure they find in a country walk at this delightful season of the year.—*U.S.*

THE BLACK SEA.—On the Black Sea coast winters are mild; snow falls, perhaps, but hardly lies, all sorts of southern plants thrive in the open air, and the rainfall is so abundant that vegetation is everywhere, even up in the mountains, marvellously profuse. At Poti, the seaport at the mouth of the Rion which every traveller has for his sine to pass through, the most fever-smitten den in all Asia, one feels in a perpetual vapour bath, and soon becomes too enervated to take the most obvious precautions against the prevailing malady. Higher up, in the deep valleys of the Ingur and Kodor, rivers which descend from the great chain, the forests are positively tropical in the splendour of the trees and the rank luxuriance of the underwood. If there were a few roads and any enterprise, this country might drive a magnificent trade in wood and all sorts of natural productions. This is the general character of the Black Sea coast. But when you cross the watershed at Sarum, and enter the basin of the Kur, drawing towards the Caspian, everything changes. The streams are few, the grass is withered on the hillside, by degrees even the beechwood begins to disappear; and as one gets further to the east beyond Tiflis, there is in autumn hardly a trace of vegetation either on plain or hills, except along the courses of the shrunken rivers. In these regions the winter is very severe, and the summer heats tremendous. At Lenkoran, on the Caspian, in latitude 33 degrees, the sea is often blocked with ice for two miles from the shore, and the average winter temperature is the same as that of Maastricht, in latitude 51 degs., or Reykjavik (in Iceland), in latitude 64 degs. The explanation, of course, is that whilst the moist westerly winds are arrested by the ridge at Sarum, the eastern steppe lies open to the parching and bitter blasts which descend from Siberia and the frozen plains of Turkistan; while scorching summers are not moderated by the influence of a neighbouring sea, the Caspian being too small to make any sensible difference to the climate. In Armenia the same causes operate, with the addition that, as a good deal of the country stands at a great height above the sea level, the winters are in those parts long as well as terrible. At Alexandropol, for instance, the great Russian fortress over against Kars, where a large part of her army is always stationed, snow lies till the middle of April, spring lasts only about a fortnight, and during summer the country is parched like any desert.—*Cornhill Magazine.*

THE DUTCHMAN AND TRADE.—He did not trouble himself with doctrines about the opening and closing of markets, the balance of trade and the estimate of exports and imports, and the like. His principle in trade was number one. Wherever he could do a profitable job, he undertook it, only calling on the rest of the world to leave him alone. In that same war of the Spanish succession Britain had infinite difficulty in getting the Dutch traders to join in the non-intercourse policy against France, and the allies of France, and that although Britain was safe from absolute attack, while Holland only escaped by the timely arrival of our troops. With the Dutchman, indeed, trade is a sort of religion. He used to be a just trader when the rest of Europe mixed piracy and other forms of rapacity with its transactions. But it was hard to make Meinheer believe that where he could transact a profitable and a perfectly fair job there were reasons why he must let the opportunity pass. Voltaire assures us that in the great war, when the country was only saved by the opening of the sluices, King Louis could never have been so terrible to the Dutch but for the money the Dutch money-lenders had advanced to him, and the innuendoes of war that the Dutch dealers had sold to him. While such things could be told in grave history, there was scarcely malice or injustice in a story fabricated to represent the overwhelming force of the Dutchman's attachment to legitimate, honest trade. It tells how an English and Dutch vessel had a tough contest, when the Englishmen were observed to send a flag of truce to the enemy. The cause was that ammunition had been exhausted—would the Dutchman sell at a highly profitable price a few kegs of powder? When the bargain was completed by delivery of the goods sold, the peppering recommenced.—*Blackwood's Magazine.*

THE COLORADO BEETLE.

The annexed wood-cuts from blocks lent us by the Editor of *Nature*, give a better idea of the insect in its various stages than the engravings which we published on July 9th. By an announcement made in another column it will be seen that we are prepared to present models of the beetle in all its stages to any Farmers' Club or Chamber of Agriculture.



Potato leaf with eggs of Colorado Beetle on under side.



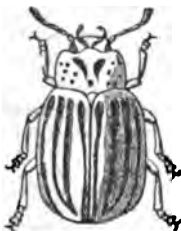
Larva of Colorado Beetle natural size.—Note. The double row of black spots along the abdomen is not sufficiently distinct in this cut.



Pupa of Colorado Beetle; natural size.



Colorado Beetle; natural size.



Magnified Sketch of Colorado Beetle.

At a meeting of the Royal Horticultural Society held on Tuesday, July 3rd, Lord Alfred Churchill in the chair, Mr. Andrew Murray, F.L.S., recently appointed scientific secretary to the Society, made a communication on the Colorado beetle. He first alluded to the history of the insect before it became a potato feeder. It was not till 1858 that it was known on a potato patch. Previous to that time it was known only on *Solanum rostratum*. It is supposed to have travelled from north to south in America on the prickly calices of the plant, sticking to the hair of buffaloes as they roamed. When it had once got south to Colorado it travelled east by many different means. It only kept to its original food-plant so far as that extended, and then went to a potato patch, and then spread wherever potatoes extended. The life of an insect occupies about one month. The eggs take six days to hatch, the larva condition occupies a fortnight, and the pupa lasts about nine days. A number of specimens were shown arranged in a case intended to be added to the entomological collection at Bethnal Green Museum. It is intended, we believe, to show the case for some few days at the South Kensington Museum. Some species allied to this beetle are also shown. The insect known as the Colorado beetle, and hitherto called *Doryphora decemlineata*, should be known by some other name, as it is not *doryphora*—spear-bearing—there being no spear in this species. Mr. Murray calls it *polygramma*. Speaking of remedies, Mr. Murray said that there was nothing like Paris green (arsenite of copper) dusted over the infested plants to kill the insects. The plan adopted at Mulheim, near Cologne, of burning a crop with sawdust and petroleum, has been found effective, but it is more costly than Paris green in its results. Paris green is used with effect in America, and it is worth noticing that in Canada the price of potatoes has not been raised. The Rev. Charles E. Whitcombe, missionary in the diocese of Niagara, Canada, writes to us from Gloucester: "Allow

me to endorse the assertion that the pest cannot be kept out of England. Its powers of locomotion and ingenuity in transmigration are very wonderful. Like all other beetles, it undergoes the three stages of development—larvæ, pupæ, and beetles; in the 'larva' stage it is most destructive. If owners of potato fields can find the eggs deposited in bunches of from 30 to 50, on the under-side of the leaf, so much the better, but this is a mode of eradication unlikely to be found practicable. Allow me also to say that August is a very late season at which to commence the search. In that month, if the beetle should have made any foothold in England, it will be engaged in the production of its third brood of larvæ. The only really effectual method for the destruction of this pest is to be found in the application of Paris green (arsenite of copper) to the potato leaf when the larvæ (slugs) are upon it. The method of such application, the proper admixture of the poison with flour or gypsum, &c., and caution in its use, may well form the subject of a Government circular, liberally spread over the length and breadth of Great Britain. Whilst no one can treat the advent of this pest as a light matter, the people of England need not fear any universal destruction of the potato crop. Undoubtedly the Colorado beetle has done much damage to the crop in Canada. The chief reason, therefore, is that, partly owing to slovenly habits so much in vogue amongst Colonial agriculturalists, partly to an incapacity to obtain means for its destruction, it has been allowed by a great majority of farmers to have its own way. With this warning before them, and with the greater resources at the command of the farmers and gardeners of England, the war with the beetle, begun upon the defensive, will, I feel sure, in a few years succeed in at least levelling this new creature to a place among the normal pests of agriculture. Should the Colorado beetle make a foothold in English soil this year the first brood of larvæ will be out not later than the month of May. When I left the province of Ontario in the early part of June the first brood were out in full force upon every potato patch or field." Mr. George Lindsay writes to us from Yardley, Birmingham:—"During seven months' sojourn last autumn in the United States I had ample experience of the habits and destructive propensities of this insect, and especially of its accommodating disposition to seek, 'fresh woods and pastures new' and even to alter its diet, according to the varying circumstances of location and opportunity. When, some months ago, lithographic drawings of the beetle were officially sent round to the principal ports of the United Kingdom to show to the Custom House officers what manner of creature they might have to treat as contraband interlopers, it was thought everything necessary in the way of precaution and protection had been provided. The Privy Council office, on further representations that the much dreaded plague is suspiciously near us, has lately had reprinted for circulation the warnings received from Canada together with a coloured engraving of the insect. I venture to suggest for the consideration of his Grace who presides over the Department, whether specimens of the Colorado beetle properly prepared would not be a far more trustworthy guide to knowledge of his 'looks, manners, and habits' than any sketch on paper however accurately drawn or elaborately coloured. I have before me, as I write, several thousands of these insects in all stages of growth and development, preserved in spirits. They were gathered by myself from two or three potato plants in August last, in a village within an hour's ride of New York. I have no desire to keep them simply as curiosities, and should be glad to distribute a few specimens among agricultural societies or farmers' clubs for preservation in their museums."

Mr. J. Boyd, writing from Cologne, has sent the following interesting letter to *The Daily News*:—

I have visited the potato field at Mulheim where this beetle was first discovered. It occupied but a very small space—a few square yards—but it was nevertheless considered necessary to destroy a larger area of the growing crop, and about two acres were fired with sawdust and petroleum, and afterwards drenched with vitriol. There can be but little doubt that this dressing has completely destroyed the larvæ; and

also such beetles as were ready to take wing, and this is my reason for believing so—that the remaining half of that potato field is perfectly free from the insect; moreover, there are some hundreds of acres of potatoes to the right and left of that spot, and nothing whatever has been seen to indicate its presence elsewhere in the neighbourhood of Mulheim. But it is ascertained that the larvae have been discovered a few days since in the town of Vietho, near Oeynhausen, in Westphalia, some four hours' distance from here by railway. Trenches were made, the potato haulm thrown in, and burnt with petroleum. Referring to the one beetle that "took wing," and which was confirmed on the spot, it seems a fact that only three were captured. One was sent to Prince Bismarck, the other to the Minister of Agriculture, and the third rests in the possession of the Bürgermeister of Mulheim on the Rhine, Mr. Fr. Wihl. Steinkopf, whose card I have enclosed in confirmation of my statement. He received me very courteously, and moreover exhibited to me some living specimens of the larvæ, and the chrysalis, and the beetle emerging from that state to that of the winged Colorado. These specimens were, as I before observed, in a living state, and occupied a large-mouthed glass jar, about twelve inches deep by nine inches in diameter. A perforated paper-cover with air-holes prevented their escape or injury. The larvæ were all vigorous, and making a hearty meal of the potato haulm with which they were fed. Two-thirds of this glass jar was filled with common earth; about four inches from the surface could be seen several chrysalis, it appearing as though the larvæ in its changing state (which acts in about three weeks after birth) had descended and attached itself to the side of the jar; and the chrysalis is not what we understand, by the ordinary meaning of the word, as oblong, but is rather round than long, and bears some resemblance to a very young potato, only that its colour is redder, and something like the bulb of the tropæolum tribe. In size it is not much larger than a big marrowfat green pea, and is corrugated horizontally across the pupæ or chrysalis.

The eggs of the beetle are somewhat similar to grains of sago seed, and are invariably deposited on the under-side of the potato leaf, and it is there that the female beetle will be found at work. She is estimated to lay from 700 to 1,800 eggs, so that 100 Colorado female beetles would produce 70,000 to 180,000; the second generation arrives in about 50 days, so that supposing the eggs to be laid in May, there would be produced in July from 24,000,000 to 72,000,000. There is no doubt they all pass through the winter in the chrysalis state, and it is therefore in the ground, about four inches under the surface, that they should be sought for when the ground is turned up for lifting the potato.

The Bürgermeister, Mr. Steinkopf, has promised to send me a beetle or two when hatched—in about twelve or fifteen days hence—and I will not fail to forward some to you. In the meantime I send you a very correct model of the insect from its larva state of three days to the other stages of fourteen and twenty-one days, when its transformation commences into the chrysalis. These models have been made by order of the Government, and such is the demand to possess them that the manufacturer cannot keep pace with the requirements of every Bürgermeister, farmer, and potato grower in Germany, Belgium, and Holland to possess models, but arrangements have now been concluded whereby the demands of all, however numerous, can be satisfied in a few days hence.

Messrs. Stollwerck, the modellers, wish it to be made known that it is quite impossible for them to correspond with or reply to the numerous correspondence which will arrive from England, and that they have in consequence appointed a firm in London for the sole purpose of supplying the United Kingdom, and that the particulars of this agency will appear in your advertising columns in the course of a post or two, or as soon as the models are ready for delivery, say about the 15th July. In the interim, for your guidance and information, I send you one of the little cabinets containing a faithful model of the Colorado family—from the egg, through three stages of larvæ, to the chrysalis, and the final beetle.

I make no doubt but that the Privy Council Office in England and its numerous branches in the United Kingdom, together with every member of every agricultural or horticultural society, and each farmer, gardener, potato grower, and every gardener, whether public, private, or cottager, will evince a desire to possess a copy of this model cabinet, which will be found highly interesting as a work of

precaution and a work of art, and I predict that it will be found in every public museum of natural history, in the collection of every naturalist and entomological society, as also a place on every drawing-room table, the mantel-shelf of the cottager, the study of the squire, the farmer, his bailiff, and the private gardener—all are alike interested, and they cannot too soon instruct their several servants, labourers, and workmen now to seek, discover, and destroy these pests, which bid fair to be a thousand times of greater importance than all the Phylloxera, unless it be destroyed in its earliest stage.

The Irish Farmers' Gazette says:—

During the past week some of our daily contemporaries have been much alarmed by the discovery of certain insects on board one of the Liverpool steamboats. The insects were supposed to be the Colorado beetle; but from all we can learn we believe they were specimens of a highly improved breed of bugs, which *The Mark Lane Express* states has been imported into Liverpool for the special benefit of visitors to the Royal Agricultural Show. As yet, the Colorado beetle has not appeared in this country.

A WORD FOR "SAIREY JANE."—The amusing self-complacency with which servants are rebuked by their mistresses for follies of which the mistresses themselves are conspicuous examples is one of the most glaring and ludicrous anomalies of Society. A lady who dresses herself and her daughters in the height of fashion complains bitterly of her servants wearing flowers in their bonnets, or displaying anything approaching to stylishness in their dress. A lady to whom flirtation and the incense of male admirers are as the very breath of her nostrils, who would find life a dreary desert of *ennui* without them, becomes almost apoplectic with indignation at the thought of her servants encouraging followers in the kitchen. The drawing-room *belle* and the area *belle* one would fancy were of a wholly different order of beings, with different feelings and different organisations. Yet, in point of fact, both are women; both are, therefore, vain, flighty, fond of admiration, and of the companionship of the other sex. In the matter of human nature they are on a par, and if human nature is allowed to assert itself in the one case, how can it be reasonably expected to restrain itself in the other? Whatever be the faults of servants—and we should be the last to deny that those faults are many and aggravating—it must be admitted that they are human beings, with the feelings, emotions, and inclinations of human beings, and that a humane regard for these characteristics of human beings is not only the duty but the best policy of masters and mistresses. The life of household servants is, after all, a laborious and monotonous one—it needs some little cheerful colouring—and a little gracious and friendly recognition from their superiors would do much to relieve its dullness. It should not be forgotten that servants see their masters and mistresses enjoying themselves and amusing themselves, and they would be more than human if the sight did not provoke some envious desires, some discontented comparisons, and some resolves to introduce an element of enjoyment and amusement into their own lives. Society generally would, we are convinced, be all the better for the establishment of a wider and more general sympathy with labour. We do not insist upon every gentleman being his own valet or every lady her own lady's-maid. We do not insist upon young ladies and gentlemen being forced to do all the menial work of the house, as the young lords and ladies of the Middle Ages were compelled to do. We do not insist upon the employment of lady and gentlemen "helps." We have no desire to see Society revolutionised. But we think that gentlefolks might with advantage abate some of their lofty scorn for all kinds of manual labour, and for those whom necessity compels to be hewers of wood and drawers of water. And if they would do this we think we might yet see a return of "the old Saturnian reign," when there were bonds of interest between the family and the servants which were mutually beneficial to both.—*Sporting Gazette*.

THE COBDEN CLUB.

At the annual meeting of the Cobden Club, held on the 7th ult., Mr. T. B. Potter, M.P., in the chair, the report was read and adopted. It enumerated the publications issued and others circulated by the Club. Those relating to agriculture were:—

"Relations of Landlord and Tenant," by William E. Bear, 5,000 copies; "An Essay on the Commercial Principles Applicable to the Hire of Land," by the Duke of Argyll, 3,000 copies; and "An Agricultural Rip Van Winkle," by William E. Bear (Casell), 1,000 copies.

In the discussion on the report,

Mr. JAMES HOWARD said: I have great pleasure in being able to corroborate what has been stated as to the progress of public opinion in favour of Free Trade principles in the United States. Those principles are taking firm hold of the more intelligent minds in that country. I cannot say quite so much for our own colonies. New South Wales forms a brilliant exception. In Canada there seems to be a lingering after higher protective duties to their manufactures—and I was not a little surprised when I visited South Africa last year to find how great and strong a hold the principles of Protection had taken upon the people of that remote region. I entirely agree with the remarks of the chairman, and with what has fallen from Mr. Baxter, that the Club is doing great good. Although we may not be able to influence the masses as we could wish, still the publications of the Club have a considerable influence upon thoughtful minds in this and other countries. I meet with men of different shades of political opinion, and am often surprised to find how fully they are familiar with the publications of the Club, and I have been much pleased to find it so. There are, however, one or two matters in the proceedings of the Club to which I venture to take exception. I take exception to the writing of a preface, by the committee, before some of the Club's publications, if not exactly repudiating some of the views expressed in those publications, at all events not accepting them, or throwing out hints that the writers hold extreme or unsound views. Now, the Cobden Club has been established for the dissemination of certain fixed and well-known principles, and it appears to me to be not quite consistent with the objects of the Club to send forth a paper into the world while in some measure repudiating the principles enunciated by the writer. Of course I refer to the essay by Mr. Bear, and the Duke of Argyll. With respect to the essay by the Duke of Argyll—a name which cannot be mentioned in Liberal circles without respect—I contend that his pamphlet on "The Commercial Principles Applicable to the Hire of Land" would have been far more properly published by a Tory Club than by a Liberal one. It is not in harmony with public opinion in the Liberal party. The Duke has advocated that commercial principles should be applied in the relations of landlord and tenant. I at once say I agree with the Duke on this; but I would say at the same time, first abolish the privileges now enjoyed by the landlords, take away the feudal rights which they have enjoyed, and the privileges which they enjoy by the law of distraint and the law of hypothec. I say abolish the protection which the landlord enjoys, and then the Duke may consistently advocate that commercial principles should apply to the hire of land advocated. But so long as the rights of tenants are ignored and the privileges of the landlords are secured to them (unjust privileges, as I contend), the time has not arrived for Free Traders to advocate the application of commercial principles to the hire of land. Our first duty is to remove class protection.

The CHAIRMAN said that prefaces had been printed in only two publications—first in Mr. Bear's pamphlet last year, on "The Relations between Landlords and Tenants in England and Scotland," and this year in the Duke of Argyll's pamphlet. With regard to Mr. Bear's pamphlet, it was considered that it would be well to have an essay on that subject from the farmers' point of view. He (the chairman) agreed with the views propounded in Mr. Bear's pamphlet, but there were gentlemen on the committee who thought that Mr. Bear went a little too far, and there was a sort of tacit understanding

that the Duke should be permitted to reply. Before the Duke's pamphlet was printed, copies were distributed among members of the committee and others, and at last it was almost unanimously resolved to publish it. He (the chairman) confessed that he did not like these prefaces, but the case of these two pamphlets was exceptional, and circumstances seemed to render a preface necessary.

Mr. J. W. PROBYN, as the writer of the preface, said they arose out of the fact that the committee were not of one mind as to Mr. Bear's views. Some agreed with Mr. Bear, while others thought that the Duke of Argyll's views were more in accordance with Free Trade principles than those of Mr. Bear. The general feeling of the committee was that as the question was an extremely important one, it was very desirable that the Club should lend itself to a full and fair argument of the whole question; and therefore, without pledging itself to the views expressed on the farmers' side by Mr. Bear, or on the landlords' side by the Duke of Argyll, the Club became the vehicle of setting the whole question fully and fairly and frankly before the country. It was thought to be undesirable to send forth these two pamphlets without a preface, because it was perfectly obvious that persons could not agree with both. For him if, he might say that he and one or two others held what he might call an intermediate opinion between the two pamphlets, and therefore there were three sets of opinions upon that question, and he thought the Cobden Club would have been wanting in the fulfilment of one of its functions if, having gone so far, the committee did not honestly explain their position in relation to those two pamphlets.

Mr. HOWARD regarded the Club as having been formed for the dissemination of certain sound and well-defined doctrines; a branch of the committee had, therefore, published a pamphlet on the land question from the farmers' point of view, and another from the landlords' point of view—the one totally opposed to the other. He thought, therefore, they had better publish one from the manufacturers' point of view, and he (Mr. Howard) would be pleased to furnish them with an answer to the Duke of Argyll from a manufacturers' point of view.

The CHAIRMAN said he believed the committee would be disposed to take a favourable view of Mr. Howard's suggestion. For his own part he would like to see a pamphlet published by the Club from the manufacturers' point of view.

Mr. RYLANDS said: I was one who opposed the publication of the Duke's pamphlet, and I think Mr. Howard is justified in saying that this Club is formed for the dissemination of sound principles; but even that must be taken with some limitation. There are certain difficulties which have to be considered. I think that Mr. Cobden was one of the most remarkable men for appreciating public questions. He laid down principles which every day's experience seems to show were very reliable principles. But he was not an inspired man, and we do not pretend that he was inspired, or that in the course of his writings he laid down a complete set of political principles. The truth is that on this land question, when I looked at his writings I found that, although there were certain principles laid down, there are many details to be considered, and you cannot go and lay down the rule and say, "These were Cobden's rules." No doubt we are deficient as a Cobden Club in not having a gospel. We have no authoritative line of opinion laid down by which we may be bound. But we have a large number of independent minds who generally sympathize with the views of Richard Cobden. We cannot have absolute uniformity of opinion. We must allow a little divergence. And if we can direct the public mind and secure discussion on questions in which Cobden was interested, we are doing what I think is the best work we can do. If we cannot arrive at absolute uniformity of opinion on one of those questions I do not think we must be prohibited from publishing pamphlets, with or without a preface. Mr. Howard has made a handsome offer to the Club, and I trust the committee will avail itself of his offer for the coming year. I am glad of the publication of the Duke of Argyll's views, because it gives an opportunity of answering him and exposing what I believe to be some of the fallacies of his pamphlets.

Mr. BAXTER entirely agreed with Mr. Rylands that what they wanted was discussion, and he thought the committee would be greatly indebted to Mr. Howard for his offer. He observed that Mr. Howard did not dispute the Duke of Argyll's views with regard to the commercial principles applicable to the hire of land, but simply demurred on the ground that the landlords had special privileges. He thought the special privileges of landlords would be a good subject for the Club to take up.

The CHAIRMAN pointed out that the committee had just appointed a sub-committee on "land laws giving exceptional privileges to land and imposing special burdens thereon."

Mr. BRIGGS complained that in the Duke of Argyll's pamphlet there was not a word about giving the poor farmer the freedom to malt his own barley or to grow whatever crops would pay him best. He wished to see the Cobden Club advocate the freedom of trade in its widest sense.

The motion was then carried, and the committee was re-elected, the name of Mr. James Howard being added to the committee, and also to the sub-committee on land laws.

A vote of thanks to the chairman, on the motion of Mr. Thomas Milner Gibson, brought the proceedings to a close.

SOCIAL SCIENCE CONGRESS.

The following are the special questions selected for discussion at the forthcoming congress at Aberdeen:—

I.—DEPARTMENT OF JURISPRUDENCE AND AMENDMENT OF THE LAW.—International Law Section.—1. Whether the jurisdiction of a nation, civil and criminal, over the seas adjoining its territory ought to be general or limited, and, if limited, to what extent? 2. Whether a prior bankruptcy in one country ought not to carry the right to moveables all over the world, as against a subsequently declared bankruptcy in another country? Municipal Law Section.—1. Whether further legislation is not desirable to prevent or remedy the frauds committed by promoters of companies? 2. Whether, and to what extent, it is expedient and practicable to alter or control by legislative enactment, contract between landlord and tenant? Repression of Crime Section.—1. Is it desirable to form an intermediate industrial school for the preparatory training of boys for service in the army, as recommended by the committee of the War Office, November, 1886? 2. What is the best kind of labour for prisons and reformatory schools; (a) in relation to the prisoner; (b) in relation to the labour market? 3. Can any better measures be devised for the prevention and punishment of infanticide?

II.—EDUCATION DEPARTMENT.—1. What are the merits and defects of the present system of competitive examination for public appointments? 2. What are the best means of securing a high standard of secondary education? 3. What are the remedies for irregular attendance and non attendance at primary schools?

III.—HEALTH DEPARTMENT.—1. What is the best mode of providing suitable accommodation for the labouring classes, and of utilising open spaces in towns? 2. How can the sanitary condition of the population engaged in the coast fisheries of Scotland and the United Kingdom be improved? 3. The present state of house accommodation in rural districts. Can its evils be remedied?

IV.—ECONOMY AND TRADE DEPARTMENT.—1. What are the causes of the present general depression of trade all over the world? 2. What are the social effects of trade unions, strikes, and lock-outs? 3. What are the results of the administration of the poor laws in Scotland as compared with those of the other parts of the United Kingdom?

V.—ART DEPARTMENT.—1. What principles should govern the restoration of ancient buildings, or their preservation as memorials? 2. Is our modern system of art competition favourable or unfavourable to art progress? 3. How can art be best introduced into the houses of persons of limited income? Papers volunteered on other subjects coming within the scope of the several departments will be read and discussed.

ENERGY AND PHYSIQUE.—There are persons of a nervous temperament who seem to be always upon wires. Nature has given them energy; but their physique is in many cases inadequate to supply the demands made upon it. The

team is there, but the boiler is too weak. Duke d'Alva, according to Fuller, must have been of this nature. "He was one of a lean body and visage, as if his eager soul, biting for anger at the clog of his body, desired to fret a passage through it." The same thought was wittily expressed by Sydney Smith when he exclaimed: "Why, look there, at Jeffrey; and there is my little friend—, who has not body enough to cover his mind decently with; his intellect is improperly exposed." Now these are just the sort of people who should not kill themselves, for though wrapped in small parcels, they are good goods. They owe it as a duty to themselves and others not to allow their fiery souls "to fret their pigmy bodies to decay"—not to throw too much zeal into trifles, in order that they may have a supply of life-force for things important. He who desires to wear well must take for his motto "Nothing is excess." Such a one, as we have had occasion more than once to urge, avoids dinners of many courses, goes to bed before twelve o'clock, and does not devote his energy to the endurance of over-heated assemblies. When young men around him have got athletics on the brain, he keeps his head and health by exercising only moderately. He is not ambitious of being in another's place, but tries quietly to adorn his own. "Give me innocence; make others great!" When others are killing themselves to get money, and to get it quickly, that with it they may make a show, he prays the prayer of anger: "Give me neither poverty nor riches," for he thinks more of the substance than of the shadow. This is the truly wise and successful man, and to him shall be given, by the Divine laws of nature, riches (that is, contentment) and honour (that is, self-respect), and a long life, because he did not waste the steam by which the machine was worked. Is homely proverb he "kept his breath to cool his porridge," and most probably was a disciple of Isaac Walton.—*Chamber's Journal*

RAISING SEEDLING POTATOES.—Experimentalists in potato-raising will find that it is a comparatively easy labour, if they have both plenty of time to attend to their products and plenty of space in which to grow them. When the sorts to be operated upon are selected—and there can be no better time to do so than the present—the operator should select a couple of fairly-expanded blooms, and carefully remove the yellow pollen cases, leaving the stigma uninjured; then take flowers from the pollen parent, and, turning back the petals, hold the flower between the points of the forefingers, the thumb-nail of the same hand being brought immediately beneath the pollen-cases of the flower; touch these sharply upward with the point of a penknife, and the pollen will fly out in minute grains over the surface by the nail; carry it thus to the seed-blooms and touch the points of the stigmas with the pollen. Tie a piece of coloured wool round the stem of the flower, and mark the cross and colour of wool in your pocket-book. Look to the berries at times, and remove as soon as ripe. The ripe berries should be placed separately in bags or small boxes, or, if done systematically, in a shallow drawer, in which there are many partitions. With each berry should be put a piece of card on which is written the name of the parent kinds. Kept dry, the tissue of the berry will gradually decay, and finally leave the seed clean and dry.—*The Gardeners' Magazine*.

ADDLED EGGS.—An egg is said to be addled when, after it has been sat upon, it is morbid or barren, and so produces nothing. It is impossible to tell beforehand whether or not an egg will prove fertile, but the question can be decided at the end of about eight days. Then the unfertile eggs can be removed, and so those that are left will get more heat, and the chickens be all the stronger. In order to test the eggs when the proper time has arrived, remove the hen by candle-light, and take each egg separately and hold it between the eye and the light. If the egg be barren it will still be translucent, the light passing through it almost as if it were new laid. If it be fertile it will appear dark all over, except, perhaps, a small portion towards the top. Persons who are greatly experienced in this work can decide which eggs will be barren at the end of only four days, and then the sterile eggs can be used for cooking purposes and will be quite as good as many of the eggs that are sold in the shops.—*Cassell's Domestic Dictionary*.

AGRICULTURAL MEETINGS IN 1877.

- AUGUST (1st week of).—Royal Jersey Agricultural Society.**—Meeting at St. Heliers. Entries closed. President, Admiral Saumarez. Secretary, Mr. Fra. Labey, Le Patrimoine, Jersey.
- AUGUST 2 and 3.—Glamorganshire Agricultural Society.**—Meeting at Aberdare. Entries closed. President, Lord Aberdare. Secretary, Mr. W. V. Huntley, Welsh St. Donatts, Cowbridge.
- AUGUST 7.—Pembroke Agricultural Show of Horses, Cattle, Sheep, and Pigs.**—Meeting at Pembroke. Secretary, Mr. Joseph Powell, Pembroke.
- AUGUST 8.—Badminton Farmers' Club.**—Meeting at Badminton. Entries closed. President, The Duke of Beaufort, K.G. Secretary, Mr. Richard W. Lloyd, Badminton.
- AUGUST 8, 9, and 10.—Royal Agricultural Society of Ireland.**—Meeting at Galway. Entries closed. President, Viscount Gough. Secretary, Mr. Seymour Mowbray, 42, Upper Sackville-street, Dublin.
- AUGUST 8, 9, and 10.—Northumberland Agricultural Society.**—Meeting at Newcastle-upon-Tyne. Entries closed. President, Earl Grey, K.G. Secretary, Mr. Jacob Wilson, Woodhorn Manor, Morpeth.
- AUGUST 9.—Whitby Agricultural Society.**—Meeting at Whitby. Entries close July 29. President, Colonel O. Duncombe. Secretary, Mr. William Stonehouse, 2, Esplanade, West Cliff, Whitby.
- AUGUST 11, 15, and 16.—Herefordshire Agricultural Society.**—Meeting at Hereford. Entries closed. Secretary, Mr. Thomas Duckham, Bavanham Court, Boss.
- AUGUST 15.—Blackpool and Fylde Agricultural Society.**—Meeting at Blackpool. Entries close August 1. President, William Henry Cocker, Esq. Secretary, Mr. Richard Gorst, 11, Church-street, Blackpool.
- AUGUST 17.—Durham County Agricultural Society.**—Meeting at West Hartlepool. Entries close July 30. Secretary, Mr. Thomas Wetherell, 32, Claypath, Durham.
- AUGUST 24.—Cleveland Agricultural Society.**—Meeting at Redcar. Entries close August 8. President, A. H. Turner Newcomen, Esq. Secretary, Mr. T. Gishborne Fawcett, Stockton-upon-Tees.
- AUGUST 25.—Halifax and Calder Vale Agricultural Society.**—Meeting at Halifax. Entries close August 11. President, Lieut.-Col. Sir H. Edwards, Bart. Secretary, Mr. William Irvine, 18, Chesapeake, Halifax.
- AUGUST 29.—North-East Somerset Farmers' Club.**—Meeting at Keynasham. Entries close August 1. President, The Earl of Warwick. Secretary, Mr. John Tudball, Chew Magna, Bristol.
- AUGUST 29.—Tarporey Agricultural Society.**—Meeting at Tarporey. Entries close August 15. President, Major Egerton. Secretary, Mr. William Vernon, 4, Lane End.
- AUGUST 29.—Lytham and Kirkham Agricultural Society.**—Meeting at Kirkham. Entries close August 18. Secretary, Mr. Joseph Parkinson, 5, Chapel-street, Preston.
- AUGUST 30.—Worsley and Swinton Agricultural Society.**—Meeting at Worsley. Entries close. President, The Earl of Ellesmere. Secretary, Mr. Alfred Spencer, Worsley, near Manchester.
- AUGUST 30.—Richmondshire Agricultural Society.**—Meeting at Bodale. Entries close August 7. President, Lord Bateman. Secretary, Mr. J. Wetherell, Richmond, Yorks.
- SEPTEMBER 4.—Leominster Agricultural Society.**—Meeting at Leominster. Entries close August 17. Secretary, Mr. Edwin Grey, 9, Broad-street, Leominster.
- SEPTEMBER 4 and 5.—Staffordshire Agricultural Society.**—Meeting at Burton-on-Trent. Entries close. Stock August 4; Poultry August 18. President, M. A. Baas, Esq., M.P. Secretary, Mr. W. Tomkinson, Newcastle, Staffordshire.
- SEPTEMBER 6.—Carlisle Agricultural Society.**—Meeting at Bagnallston, County Carlisle. Entries close August 30. Secretary, Mr. Thomas P. Butler, Ballin Temple, Tullow, County Carlow.
- SEPTEMBER 6 and 7.—Wirral Agricultural Society.**—Meeting at Birkenhead. Entries close Aug. 21. President, Richard Barton, Esq., J.P. Secretary, Mr. A. F. Gardiner, 23, Hamilton-street, Birkenhead.
- SEPTEMBER 11.—North Shropshire Agricultural Society.**—Meeting at Market Drayton. General entries close August 20. President, C. D. Hudson, Esq. Secretary, Mr. W. D. Green, Market Drayton.
- SEPTEMBER 11 and 12 (on or about).—Warwickshire Agricultural Society.**—Meeting at Alcester. Entries close. President, the Earl of Warwick. Secretary, Mr. John Moore, 1, Northgate-street, Warwick.
- SEPTEMBER 12.—Wayland Agricultural Society.**—Meeting at Watton. Entries close August 30. President, Lord Walsingham. Secretary, Mr. H. F. Grigson, Watton, Norfolk.
- SEPTEMBER 13.—Waterford Farming Society.**—Meeting at Waterford. Entries close September 6. President, The Marquis of Waterford. Secretary, Mr. Robt. S. Blee, Waterford.
- SEPTEMBER 13 and 14.—Northamptonshire Agricultural Society.**—Meeting at Market Harborough. Entries close August 11. President, R. de Capell Brooke, Esq. Secretary, Mr. John Lovell, Harpole, Weedon.
- SEPTEMBER 14.—Stanhope Agricultural Society.**—Meeting at Stanhope. Entries close September 1. President, John R. W. Hildyard, Esq. Secretary, Mr. William Morley, Sweet Wells, Stanhope.
- SEPTEMBER 14 and 15.—Cheshire Agricultural Society.**—Meeting at Crewe. Entries close September 1. President, Lord Tollerbach. Secretary, Mr. John Beckett, Oulton Pool Cottage, Tarporley.
- SEPTEMBER 18 and 19.—Derbyshire Agricultural Society.**—Meeting at Derby. Entries close, Stock &c., August 11. Implements and Poultry September 4. President, John Gilbert Compton, Esq. Secretary, Mr. George Corbett, Canal Office, Derby.
- SEPTEMBER 21.—Carmarthenshire Agricultural Society.**—Meeting at Carmarthen. Entries close September 8. President, Cowell Stepney, Esq., M.P. Secretary, Mr. D. Prosser, White House, Carmarthen.
- SEPTEMBER 21.—Brampton Agricultural Society.**—Meeting at Brampton, Cumberland. Entries close September 12. President, C. W. G. Howard, Esq. Secretary, Mr. John Smith, Cotehill, Brampton, Cumberland.
- SEPTEMBER 21.—Montgomeryshire Agricultural Society.**—Meeting at Machynlleth. Entries close last Saturday in August. President, The Marquis of Londonderry. Secretary, Mr. W. Ashford, Welshpool.
- SEPTEMBER. —Oxfordshire Agricultural Society.**—Meeting at Banbury. Entries close. President, H. Barnett, Esq. Secretary, Mr. Thos. F. Plowman, 1, St. Aldate-street, Oxford.
- NOVEMBER 22, 23, and 24.—Norfolk and Norwich Christmas Show of Stock, Poultry, and Grain.**—Entries close October 20th. Secretary, Mr. H. F. Earen, Norwich.
- NOVEMBER 28, and 29.—Oakham Cattle and Poultry Show.**—Entries close November 9. Hon. Secretary, and Treasurer (Cattle Show), Mr. E. Wortley, Ridlington, Uppingham. Sec., (Poultry Show), Mr. John Pollard, Oakham.
- DECEMBER 5.—Edenbridge Fat Stock, Corn, and Root Show.**—Meeting at Edenbridge. Entries close November 13. President, Geo. Hanbury Field, Esq. Secretary, Mr. Fred. Stanford, Edenbridge, Kent.
- DECEMBER 1, 3, 4, 5, and 6.—Birmingham Agricultural Exhibition Society.**—Meeting at Bingley Hall, Birmingham. Entries close November 1. Secretary, Mr. John B. Lythall, Bingley Hall, Birmingham.
- DECEMBER 7 and 8.—Canterbury Fat Cattle Show.**—Meeting at the New Horse Repository, Canterbury. Entries close November 3. President, Earl Granville. Secretary, Mr. George Slater, Canterbury.
- DECEMBER 10.—Pembroke Show of Fat Cattle, Sheep, and Pigs.**—Meeting at Pembroke. Secretary, Mr. Joseph Powell, Pembroke.
- DECEMBER 10, 11, 12, 13, and 14.—Smithfield Club Fat Cattle Show, in the Agricultural Hall, Islington.**—Entries close. Live Stock November 1; Implements October 1. President, Lord Walsingham. Hon. Secretary, Mr. B. T. Brandreth Gibbs. Assistant-Secretary, Mr. David Pullen, corner of Half-Moon-street, Piccadilly, London.
- DECEMBER 11.—Carmarthenshire Agricultural Society's Fat Stock Show.**—Meeting at Carmarthen. Entries close November 24. President, Cowell Stepney, Esq., M.P. Secretary, Mr. D. Prosser, White House, Carmarthen.
- DECEMBER 11, 12, and 13.—Yorkshire Society for the Christmas Exhibition of Stock, Poultry, and Roots.**—Meeting at York. Entries close November 23. President, Leonard Thompson, Esq. Secretary, Mr. John Watson, Lendal Bridge, York.
- DECEMBER 17, and 18.—Suffolk Fat Cattle Club.**—Meeting at Ipswich. Entries close November 23. Secretary, Mr. W. R. Bond, Butter Market Ipswich.
- DECEMBER 27 and 28.—Chippenhams Agricultural Society.**—Meeting at Chippenhams. Entries close December 21. President, Sir John Neeld, Bart. Secretary, Mr. E. Little, Lanhill, Chippenhams.

HOOSE IN CALVES.

PENRITH FARMER'S CLUB.

On the 3rd ult. a meeting of the Club was held in the Club-room to hear a paper by Mr. Farrall, of Aspatra, on "Hoose in Calves." The chair was taken by Mr. H. C. Howard, of Greytuke Castle.

Mr. FARRALL said the disease to which he had to call attention was in some seasons so malignant and widely-spread as to create serious consternation among stockowners and the farming community in general. After describing at some length the ova and the varieties of worms which infested the animal body, he proceeded to speak of the symptoms by which hoose or husk might be detected. The animals, he said, were usually affected with the disease in the latter part of August or during the months of September or October. When grazing on the pastures they gradually begin to show symptoms of the disease, which are unmistakable by those who have had any experience in the matter. The first sign manifested is a dry, husky cough, which continues for a few weeks, with little or no interference with the general condition of the animal. Very little is seen of the complaint during the heat of the day, but after the sun has gone down, the symptoms become more and more aggravated and apparent; indeed, infested calves may often be seen grazing quite contentedly when the sun is high up in the sky as if they were entirely free from ailment. This is undoubtedly brought about by the fact that the parasite is to a certain extent a nocturnal creature, lying as it were dormant in the day, and arousing up to renewed action with the return of evening. The disease, if allowed to go on unchecked, produces emaciation and grievous irritation, which too often end in death. In numerous districts, especially where the land is low-lying and the soil alluvial, or even occasionally on tenacious clays, serious losses are annually felt from invasion by this parasite, and husk or hoose is looked upon as one of the many evils the struggling farmer has to contend with. The *post mortem* examination of an affected animal generally reveals the fact that small worms exist in the windpipe and its branches or bronchial tubes. The external appearance of the animal is that of great emaciation, while the tissues are of a yellowish colour, and the muscles of dark red. The dark appearance is due to the impure blood circulating in the body, owing to the bronchial tubes being filled up with mucus and other frothy matter, thus preventing the proper oxidation of the blood, which naturally takes place in these organs. All the other internal parts of the body are in a normal condition, but a little wasted. In very bad cases the lungs are very much congested or discoloured. On laying open the trachea and bronchial tubes the worms are usually discovered, but should they not appear where indicated, a positive conclusion should not be too hastily arrived at owing to the absence of the parasite. It may be that the dependents, after a temporary residence, may have quitted the bronchial tubes and have been coughed up and carried off through the mouth and nostrils, along with the mucus in which they live, and falling upon the pastures, become the means of infecting future herds. As to the further question—How do the animals become affected? Mr. Farrall said it was one of the most important questions connected with the subject. It was one not easily answered, and one in which many theories have been promulgated. One theory, accepted by a few of those who have given attention to the matter, is that the ova or germs of the thread worms are taken up by calves when depasturing upon grounds that have been previously occupied by affected animals. These germs, it is maintained, find access to the stomach of the calf, along with its food, and are then circulated through the blood, or make their way through the outer wall of the stomach and diaphragm into the lungs and bronchial tubes. By what process this migration is effected is not explained; and he was unable to conceive how it can be carried out. The absurdity of the circulating theory becomes more evident when we consider that the food passes into the first stomach and there undergoes the peculiar process of being formed into pellets, to be again thrown into the mouth and re-chewed. It next passes through the three stomachs into the intestines, and is acted upon by the juices of the stomach during the passage. It is therefore extremely problematic

whether the ova can be taken up by the small lacteals, and which have found their way into the bronchial tubes, and are being hatched; and as the small thread-like worms begin to develop in size, the irritation increases, the flesh begins to fall off the animal, the nose is projected, the neck extended, the back slightly arched, the belly tucked up, the coat appears sterner, the eyes dull and sunken, and the whole countenance heavy and anxious-looking. Should the animal be in the field, the disease will soon be shown, and will be carried forward by the blood to the seat of the lungs as the proper *habitat* for further development. Mr. Farrall described, in a very interesting manner, the various means that had been adopted to arrest the spread of this troublesome disease, which, he said, caused serious loss in some localities, and concluded by recommending the following mixture as effective, and at the same time gentle, in its effects as any which had come under his notice:—One ounce of gum camphor, dissolved in three ounces of turpentine; four ounces of spirits of nitre; four ounces of *Balsam Capivi*; half an ounce of chloroform, and twelve ounces of linseed oil—two tablespoonfuls of the mixture to be given each night in a little milk. He then spoke of the virtues of lime and salt when administered internally, and remarked that the application of one or both of these articles to the land would also act beneficially. In fact, it had been found to be the case, not only in the prevention of the disease, but also that of red-water in cattle and "scour" in calves, red-water being caused by a want of alkaline matter in the soil; the herbage was naturally deficient in saline matter, thus causing a deterioration of the blood and a breaking up of the corpuscles, which pass off by the kidneys, giving the urine a dark colour—hence the name "scour" in stirks—caused by the presence of "dules" in the liver.

Mr. THOMPSON, V.S., and General Manager of the Aspatra Agricultural Society, then read a paper "On manures and feeding stuffs, and their effect on animals in health and disease." The lecturer recommended careful nursing, and the application of salt to the land. The application of 5 cwt. to the acre had been the means of almost entirely dispelling the disease from his district.

A discussion followed, in the course of which Mr. DAWSON, V.S., generally endorsed the views of Mr. Farrall, adding that usually the disease broke out on rich land over-stocked with animals.

Mr. THOMAS BIRD said he was acquainted with the nature of the disease, adding that he generally found it most prevalent in dry weather, when there was a scarcity of water. He had great faith in draining, and artificial manure, which had almost eradicated the disease in his district.

A long discussion followed, at the close of which votes of thanks were given to the lecturers and the Chairman.

STOCK OF GRAIN IN LONDON

On 1st July, 1877, compared with the corresponding period of 1876.

	Waterside Granaries.	Railways	Waterside Granaries.	Railways.
	1877.	1877.	1876.	1876.
Wheat.....	217118	2878	306397	5521
Barley.....	129313	2983	17408	840
Malt.....	7395	10373	1380	7631
Oats.....	316783	583	113490	2560
Rye.....	7	—	131	34
Beans.....	35635	1440	6447	1085
Pean.....	14502	639	2837	823
Maize.....	91558	1865	66564	4018
Tarps.....	11894	731	2123	10
Linseed.....	18951	88	34015	—
Rapeseed.....	43968*	—	6229†	—
Seeds.....	9817	4153	3004	2110
Flour.....	br. 10315 sk. 71758	br. 70216	br. 60539 sk. 33428	br. 9 sk. 2376

* Rape, 40,373; Oil, 1,583; Cotton (tons), 1,010.

† Rape, 57,839; Oil, 1,731; Cotton (tons), 3,438.

AGRICULTURAL SOCIETIES.

DONCASTER.

(Abridged from The Doncaster Gazette.)

In every respect, except as to the place where it was held, the Show may be said to have been a counterpart of those held in previous years. The Secretary and Committee had shown an equal desire to promote a successful issue, the various collectors had done their best to secure a good and substantial subscription list, and the Show-yard Committee had endeavoured to make their arrangements so that they should be satisfactory to all. But notwithstanding this, neither Secretary, Committee, nor, in many cases, the members of the Society, could forget the one who had been the mainstay of the Association, and since its commencement the head of the Society, and who would know it no more. The loss of Mr. Brown has been deeply felt, and will be hard to replace; and these were the thoughts that recurred to many minds as his familiar face was missed from the show-yard at the opening of the exhibition on Wednesday last.

In point of entries, and the amount of money given, there was little difference from previous years. As will be seen by the subjoined statistics, though the entry of cattle, sheep, and pigs was less, the loss in this respect was fully counterbalanced by the increase in the classes for horses, poultry, &c. :—

	1876.	1877.
Cattle	75	64
Sheep	92	70
Horses	223	279
Pigs	62	35
Wool	6	6
Poultry	132	173
Pigeons	39	34
Dogs	241	216
Total	873	877
Shoeing Smiths	12	10
	885	887

In the number of entries wool showed the same as last year, though the quality was said to be far superior to that then shown. The whole of the thirty fleeces were grown in the district, a fact speaking well for the Doncaster locality. The first prize was awarded to Mr. W. Jennings, of Rossington, and the second to Mr. Ingham, of Marr.

PRIZE LIST.

JUDGES.—CATTLE: G. H. Sanday, Wensley House, Bedale; J. B. Singleton, Givensdale, Pocklington; C. Bland, Gadsby, Leicester. SHEEP and PIGS: C. W. Tindall, Aylesby Manor, Grimsby; B. Baker, Gamston, East Retford; F. Dickson, Healdington, York. HUNTERS and ROADSTERS: T. Ellerby, Whitwell, York; F. Gordon, Thornhaugh, Wensford; Captain Shipworth, Howsham, Brigg. COACHING and AGRICULTURAL HORSES: T. Plowright, jun., Finchbeck, Spalding; C. Wood, South Dalton, Hull; E. Godfrey, Brigg. WOOL: E. Auckland, St. George's-terrace, Doncaster. POULTRY and PIGEONS: J. Dixon, North Park, Bradford. DOGS: E. Armstrong, Danby Lodge, Yarm; W. Lord, King's Norton. SHEARING: G. Mather, Doncaster. BUTTER and EGGS: Mrs. Chapman, Pontefract.

CATTLE.

SHORTHORNS.

Bulls, any age above three years, which have not previously obtained the first prize in this class.—First prize, £10, Marquis of Exeter, Burghley Park, Stamford (Telemachus 6th); second, £5, T. Atkinson, Manchester (Sergeant Irwin).

Bulls, above two and not exceeding three years old.—First prize, £15, T. H. Bland, Market Harborough (General Fussee); second, £10, F. J. S. Foljambe, M.P., Worksop (Lavango).

Bulls, above one and not exceeding two years old.—First prize, £15, W. B. Tennant, Selby (Calamazoo); second, £10, F. J. S. Foljambe, M.P. (Flag of France); third, £5, T. H. Bland (General Fir).

Ball calves, above five and not exceeding twelve months old.—First prize, £5, not given, there being but one entry; second, £3, S. Barker, Doncaster.

Cows of any age above three years old, in calf or milk, which have not previously obtained the first prize in this class.—First prize, £10, Marquis of Exeter (Telemachus); second, £5, T. H. Hutchinson, Catterick (Lady Alice).

Heifers, not exceeding three years old, in calf or milk.—First prize, £10, Lady Pigot, Weybridge, Surrey (Imperious Queen); second, £5, H. Fawcett, Leeds (Maggie Mildred).

Heifers, not exceeding two years old.—First prize, £10, Earl of Ellesmere, Manchester; second, £5, T. H. Bland (Brazilian Bride); third, £3, G. Ashby-Ashby, Rugby (Innocence).

Heifer calves, above five and not exceeding twelve months old.—First prize, £5, A. Garfit, Lincoln (Asphodel); second, £3, J. Snarry, York (Eastern Princess).

Alderney, Jersey, or Guernsey cows or heifers, in calf or milk.—The president's prize of £10, J. E. Groom, Manor House, Hooton Roberts; second, £3, Earl of Wharfedale, Wortley Hall (Lady Susan).

Alderney bulls, fit for service.—The president's prize of £5, G. M. Hutton, Knaith, Gainsbro'; second, £3, B. H. Brooksbank, Tickhill.

Cows, for dairy purposes.—First prize, £5, John Scott, Womersley (Carnation); second, £3, J. E. Groom, Hooton Roberts; third, £3, W. Dyson, Worksop.

A silver cup, value £25, for the best female Shorthorn in the show, Earl of Ellesmere, Manchester.

A silver cup, value £10 10s., for the best bull in classes 2, 3, and 4, W. Tennant, Selby (Calamazoo).

SHEEP.

LEICESTERS.

Shearling ram.—First prize, £10, and second, £5, T. H. Hutchinson, Catterick.

Ram of any age.—First prize, £5, and second, £3, W. Coverdale, Newton, York.

Five shearling gimmers.—First prize, £10, W. Brown, York; second, £5, T. Marris, Ulceby.

LINCOLNS.

Shearling ram.—First prize, £10, A. Garfit, Lincoln; second, £5, R. Wright, Lincoln.

Ram of any age.—First prize, £5, E. J. Howard, Lincoln; second, £3, R. Wright, Lincoln.

Five shearling gimmers.—First prize, £10, R. Wright; second, £5, E. J. Howard.

SHORTWOOLS.

Shearling ram.—First prize, £5, and second, £3, W. Baker, Atherstone.

Ram of any age.—First prize, £5, and second, £3, W. Baker.

Five shearling gimmers.—First prize, £5, and second, £3, W. Baker.

Five shearling widders.—Prize, £5, J. E. Groom, Hooton Roberts.

SPECIAL PRIZES.

A silver cup, value £5 5s., for the best pen of five longwool shearing widders, to be shorn not earlier than the 1st day of April, 1877.—Cup, and second prize, £3, W. B. Tate, Rossington.

Five shearling gimmers, bred by and the property of farmers residing within twenty miles of Doncaster.—First prize, £7, and second, £3, S. Barker, Doncaster.

Five ewes, the property of farmers residing within twenty miles of Doncaster, that shall have suckled lambs to the time of the Show.—First prize, £5, J. Winder, Doncaster; second, £2, R. D. Job, Bawtry.

A silver cup, value £5, for the best pen of lambs, bred and reared by a member of this Society.—First prize, W. Baker, Atherstone; second, £3, R. D. Job.

PIGS.

Boar, large breed.—First prize, £4, and second, £2, R. E. Duckering, Kirtou Lindsey.

Sow, large breed, in pig or milk.—First prize, £4, J. and F. Bramfitt, Leeds; second, £2, R. E. Duckering.

Boar, small breed.—First prize, £4, R. E. Duckering; second, £2, E. Ellis, Bentley.

Sow, small breed, in pig or milk.—First prize, £4, R. E. Duckering; second, £2, J. Graham.

Boar, large breed, not exceeding twelve months old.—First prize, £4, R. E. Duckering; second, £2, T. G. Farrar, Balby.

Sow, large breed, not exceeding twelve months old.—Prize, £4, R. E. Duckering.

Boar, small breed, not exceeding twelve months old.—Prize, £4, R. Addinall, Doncaster.

Sow, small breed, not exceeding twelve months old.—Prize, R. E. Duckering.

Pen of three store pigs, of any breed, the same litter.—First prize, £4, T. Parkinson and Sons, Doncaster Mills; second, £2, W. Simister, Stockport.

Cottager's pig, not exceeding twelve months old.—First prize, £2, C. Swaby, Doncaster; second, £1, W. Gilvray, Doncaster; third, 10s., R. Webster, Doncaster.

Boar of any breed, not qualified to compete in any other class.—First prize, £4, W. Simister; second, £2, A. Gardt, Lincoln.

Sow of any breed, not qualified to compete in any other class.—First prize, £4, W. Simister; second, £2, A. Coward, Doncaster.

HORSES.

AGRICULTURAL.

Stallion for getting agricultural horses.—First prize, £10, J. F. Crowther, Mirfield (Topman); second, £5, Stand Stud Company, Manchester (Young Champion).

Entire agricultural colt, foaled in 1875.—A silver cup, £5 5s., and £5, H. Campbell, Rotherham (Reynard); second, £5, R. Tweedie, Catterick (The Forester).

Brood mare for breeding agricultural horses, with foal sucking.—First prize, £10, Stand Stud Company; second, £5, H. Pullaine, Selby.

Three years old agricultural gelding or filly.—First prize, £10, R. Coggan, Epworth; second, £5, P. B. D. Cooke, Doncaster.

Two years old agricultural gelding or filly.—The President's prize of £5, and the Society's prize of £5, H. Smith, Bingham; second, £5, Stand Stud Company.

Yearling agricultural colt.—First prize, £5, J. Oxley, Gainsborough; second, £2, Stand Stud Company.

Yearling agricultural filly.—First prize, £5, J. Oxley; second, £2, Stand Stud Company.

Pair of draught horses, used exclusively for agricultural purposes.—First prize, £10, W. Bramley, Amcotts; second, £5, W. Bramley.

Gelding or mare for agricultural purposes.—A silver cup, value £5 5s., W. Bramley; second, £2, J. T. Brown, Doncaster.

Dray horse or mare for town work.—A silver cup, value £5 5s., W. Bramley.

ROADSTERS.

Stallion for getting roadsters.—First prize, £10, Stand Stud Company; second, £5, J. Collings, York.

Brood mare for breeding roadsters, with foal sucking.—First prize, £10, J. Kirby; second, £2, Stand Stud Company.

Three years old roadster gelding or filly.—First prize, £5, T. Bowman, York; second, £2, W. Rickell, Pocklington.

Two years old roadster gelding or filly.—First prize, £5, J. P. Crompton, Burton Agnes; second, £2, not awarded, there being only one entry.

Three years old coaching gelding or filly.—First prize, £10, J. Kirby; second, £5, J. Kirby.

Hackney or roadster, any age or sex, equal to carry 15 stones, not exceeding 15 hands 2 inches high.—First prize, £10, and a silver cup value £5 5s., Stand Stud Company, Manchester; second, £5, W. H. Blackman, Howden.

Hackney or roadster, any age or sex, equal to carry 12 stones, not exceeding 15 hands high.—First prize, £10, J. Robinson, Hull; second, £5, W. H. Cranswick, Barton Agnes.

Gelding or mare, driven in single harness, over 15 hands 2 inches.—First prize, £10, Stand Stud Company; second, £5, W. Smith, Derby.

Gelding or mare, driven in single harness, under 15 hands 2 inches.—First prize, £10, R. Martin, York; second, £5, Stand Stud Company.

Pony, any age or sex, under 14 hands, to be shown driven in single harness.—First prize, £5, W. Askew, Arncliffe, Westmoreland; second, £2, W. Broekton, Tudworth.

Brougham horse or mare, to be shown driven in harness.—A silver cup, value £7 7s., W. Smith, Derby; second, £3, J. Baker, Wisbech.

Brood mare for breeding hunters, with foal sucking.—First prize, £15, E. Hornby, York; second, £5, H. Watson, Newbegin, Filey.

HUNTERS.

Thoroughbred stallion for getting hunters.—First prize, £20, W. H. Clark (for C. J. Lefevre), Howden; second, £10, M. Biddulph, Ledbury.

Five years old hunting gelding or mare, substance and breeding to be taken into consideration.—First prize, £40, A. J. Brown, Pontefract; second, £10, J. C. Bilton, York.

Four years old hunting gelding or filly, equal to carrying 15 stones.—First prize, £15, and £25, E. Paddison, Lincoln; second, £10, Poord P. Newton, Malton.

Four years old hunting gelding or filly, equal to carrying 13 stones.—First prize, £15, and cup, value £5 5s., A. J. Brown, Pontefract; second, £10, J. Welburn, Hackness.

Three years old hunting gelding or filly, substance to be taken into consideration.—First prize, £10, and a silver cup value £5 5s., G. Lancaster, Northallerton; second, £10, J. P. Crompton, Burton Agnes.

Two years old hunting gelding or filly.—First prize, £10, G. Lovel, Malton; second, £5, J. Shepherd, Beverley.

Jumping class.—First prize, £10, R. Saville, Sheffield; second, £5, W. W. Lovel, Hull.

PONIES.

Pony, above 12 and not exceeding 14 hands 2 inches high.—First prize, £5, J. H. Smith, Market Weighton; second, £2, W. H. Blackman, York.

Pony, not exceeding 12 hands high.—First prize, £3, G. Brown, Sturton-le-Steeple; second, £1, J. Elwin, Doncaster.

WOOL.

Five fleeces of wool, grown by the exhibitor.—First prize, £3, W. Jennings, Doncaster; second, £2, J. Ingham, Doncaster.

BUTTER.

Three pounds of fresh butter.—A silver cream jug valued at £2 5s., Mrs. Penny, Wadworth; second, a silver butter-knife valued at £1 5s., A. Turner, Rotherham; third, 10s., J. E. Groom, Hooton Roberts; fourth, Mrs. Batty, Coatham Lodge.

EGGS.

Dish of twelve eggs.—First prize, £1, Miss E. Barker, Marr; second, 10s., R. Newbitt, Epworth; third, 5s., P. B. D. Cooke, Owston.

NORTH-EAST OF IRELAND.

(From the Irish Farmer's Gazette).

The annual show of this most thriving Society was held on June the 21st and 22nd; but properly speaking the business of the meeting commenced on the 21st, with an exhibition of Messrs. John Fowler and Co's., Leeds, steam-ploughing, which was exhibited at Unicarville. The day's work was well appreciated by an immense concourse of visitors. The ploughing apparatus was purchased by Fitzwilliam Walsh, Esq.

On Thursday morning the work of the day began, at seven, Shorthorn bulls taking precedence, and in general, we may remark, we have not seen a better show of Shorthorns at the north-east meetings, and shall rejoice if the Royal is as good.

The first prize in the aged class of bulls was awarded to Messrs. Smith's Jove, a great thick bull, carrying as much flesh as could be placed on his bones. An objection was lodged against him on the score of insufficient breeding. Mr. M'Iderry's British Mantalini, bred by Mr. George Allen, was put second, a grand bull, which if he had flesh would have been first easily. Mr. Downing's

Earl of Killerby, a grand fleshy, substantial, well put to gether bull, was placed third, which position we consider was due to his very low condition.

The young bulls, on the whole, were good, but the best section was that of yearling Shorthorn heifers, in which Mr. Allen's heifer Perfection, bred by W. Stawell Garnett, got the first prize and cup as the best Shorthorn in the yard.

An unusually good lot of Ayrshires made up the special contingent, but in the other breeds there was nothing worthy of remark.

The sheep classes were far below what we have seen at Nibe orth-east, and, in fact, if it had not been for Mr. Peake and his Shropshires it would have been a total failure.

The show of pigs at Belfast is always good; but this year we think it exceeded any show of the kind we have seen in the same place. Lord Clermont's Berkshires, as a matter of course, were superb; but we regret to say that his lordship sustained a heavy loss in consequence of the death of his cup bear, from the effects of the extreme heat of Wednesday. As a consolation, Mr. McClelland sold for Lord Clermont three pigs of one litter, barely a year old, for 75 guineas, to a Canadian buyer, who had seen Lord Clermont's Wolverhampton Royal sow that went to Canada, and was determined to have more of the sort; and he was right.

The show of horses was very good—old prize-takers will be recognised.

There was a good show of poultry, and an extensive show of implements, to which we may direct attention afterwards.

PRIZE LIST.

HORSES.

STALLIONS.

The late North-East Society's Challenge Cup, value fifty sovereigns, with ten sovereigns added, for the best thoroughbred weight-carrying stallion.—Prize, T. Lindsay, Killyleagh, County Down (Masaniss).

Thoroughbred stallion for getting weight-carrying hunters.—First prize, T. Lindsay (Masaniss); second, A. Bell, Bangor (Gladstone).

Stallion calculated to get carriage, hack, or hunting horses, not necessarily thoroughbred.—First prize, T. Lindsay (Bakewell); second, H. Napier, Downpatrick (Poor Pat).

Entire colt, two years old, suitable for general purposes.—First prize, S. Gibson, Ballyrobert (Favourite); second, D. Andrews, Ballyrobert (Strathdee).

Stallion, three years old or upwards, suitable for agricultural purposes.—First prize, J. Park, Dechmont, Cambuslang (Royal Black Prince); second, W. Buchanan, Main-street, Larne (Dreadnought); third, H. McCutcheon, Edensvale (Caledonia).

Entire colt, two years old, suitable for agricultural purposes.—First prize, W. R. Wright, Enniskillen (Cock o' the North); second, J. McClure, Moneyrea (Bobby Barnes).

BROOD MARES, GELDINGS, AND FILLIES, SUITABLE FOR AGRICULTURAL PURPOSES.

Brood mare, with foal at her foot.—First prize, W. Ralston-Wright (Never Mind Her); second, W. Buchanan; third, J. B. Houston, Belfast (Blossom).

Gelding or filly, three years old.—First prize, S. M. Alexander, Limavady (Jane); second, T. J. Dugan, Newtownards (Young Orphan); third, J. Johnston, Lisburn (Charlie).

Gelding or filly, two years old.—First prize, W. Ralston-Wright (Just in Time); second, T. J. Dugan (Scrabo); third, G. Carson, Lisburn (Rafus).

Colt, gelding, or filly, one year old.—First prize, R. Murlock, Lisburn; second, J. Greer, Templepatrick; third, W. Morrow, Dundonald.

SPECIAL HUNTER PRIZE.

Hunter (mare or gelding), not less than five years old, and to carry 13 stone and upwards.—First prize, N. Morton, Ballymena (Banker); second, W. Bell, Belfast (Blackthorn).

BROOD MARES, GELDINGS, AND FILLIES SUITABLE FOR GENERAL PURPOSES.

Brood mare, with foal at her foot.—First prize, A. D. Lemon, Belfast (Beattie); second, W. Pentland, Belfast third, W. Pentland.

Gelding or filly, four years old.—First prize, W. Boyle, Carrickfergus (Irish Boy); second, J. Rankin, Kircubbin (Viceroy); third, R. M. Douglas, Coleraine (Warwick).

Gelding or filly, three years old.—First prize, J. Philips Moss Side, Dunmurry (Bismarck); second, J. Philips (Hobart Pasha); third, W. Boyle, Carrickfergus (Young Eclipse).

Gelding or filly, two years old.—First prize, D. and J. Cleland, Crossgar; second, T. Ballie, Newtownards (Jim); third, W. Herron, Hillsborough.

Colt, gelding, or filly, one year old.—First prize, T. Lindsay (The Jester); second, L. G. P. Filgate, Ballymoney (Lord Baglan); third, Mrs. T. Taylor, Annacloy County Down (Roscommon).

CATTLE.

SHORTHORNS.

Bull, calved before 1st January, 1875.—First prize, F. and W. Smith, Coleraine (Jove); second, T. and J. M'Iderry, County Antrim (British Mantalini); third, J. Downing, Fermoy (Earl of Killerby).

Bull, calved in 1875.—First prize, F. and W. Smith (Scotch Knight); second, Earl of Caledon, Caledon (Remus); third, W. Gault, Doagh (Southern Prince).

Bull, calved in 1876.—First prize, R. P. Maxwell, Downpatrick (Woodranger); second, J. Vance, Maralin (Chief of Lothian); third, Lord Clermont, Dundalk (Lord Seafeld).

Cow, in calf or milk, of any age.—First prize, S. Morrow, juv., Moor Hall, Killiney (Marian); second, J. Peake, Monaghan (Village Rose); third, G. Allen, Comber (Heather Bell).

Heifer, in calf or milk, calved in 1874.—First prize, J. Mulholland (Fairy Gwynne); second, W. Charley, Dunmurry (Princess Anna); third, J. Mulholland (Ruby Gwynne).

Heifer, calved in 1875.—First prize, S. Black, Randalstown (Red Rose); second, W. Charley (Lady Emily); third, Lord Clermont (Matchless II).

Heifer, calved in 1876.—First prize, G. Allen (Perfection); second, Lord Clermont (Lady Bird); third, Lord Clermont (Princess Maude IX).

AYRESHIRE.

Bull, calved before 1st January, 1875.—First prize, Mrs. A. A. Hope, Castleblaney (Bob); second, W. Martin, Middletown (Bob); third, S. M'Neill, Clooney.

Bull, calved in 1875.—First prize, Mrs. A. A. Hope (Hero); second, J. Dickey, Carrickfergus (Sandie).

Bull, calved in 1876.—First prize, Mrs. A. A. Hope (Prince); second, J. Marshall, Newry (Sandy); third, H. Greer, Newry (Bob).

Cow, in calf or in milk, of any age.—First prize, T. and D. Patton, Glasslough (Maud); second, T. and D. Patton (Jennet II); third, J. Watson, Londonderry.

Heifer, in calf or in milk, calved in 1874.—First prize, T. and D. Patton (Violet); second, J. Watson; third, J. Marshall (Mimulus).

Heifer, calved in 1875.—First prize, J. Liken, Coleraine (Maud); second, Mrs. A. A. Hope (Daisy); third, J. Watson.

Heifer, calved in 1876.—First prize, S. M'Neill, Londonderry; second, T. and D. Patton (Maggie); third, Mrs. A. A. Hope (Ruby).

KERRIES.

Bull, of any age.—Prize withheld.

Cow, in calf or in milk, of any age.—First prize, J. Sands (Mrs. Thurbane); second, J. Sands, Magherafelt (Mary).

DEVONS.

(Polled, or any distinct breed not included in the foregoing classes).

Bull, of any age.—First prize, S. Barbour, Belfast; second, H. Watson, Lurgan (Tommy).

Cow, in calf or in milk, of any age.—First prize, S. T. Mercier, Gilford (Jessie).

DAIRY COWS.

Pair of dairy cows, in milk at the time of exhibition.—First prize, G. Gibson, Malons (Newforge and Ferguson); second, F. and W. Smith, Coleraine.

SHEEP.

LONG-WOOLLED OF ANY PURE BREED.

Ram, of any age.—First prize, G. N. Callwell, Lisamoyna, Dunmurry; second, T. and J. M'Iderry.

Two-shear ram.—First prize, T. Montgomery, Dunmurry.

Pen of five ewes having had lambs in 1877.—First prize, T. Montgomery.

Pen of five shearing ewes.—First prize, T. Montgomery.

Pen of five ewe lambs.—First prize, T. Montgomery.

SHORT-WOOLLED OF ANY PURE BREED.

Two-shear ram.—First prize, J. Peake (Bedford Reserve II); second, J. Peake, Monaghan (Bedford).

Shearling ram.—First prize, J. Peake; second, J. Peake.

Pen of five ewes having had lambs in 1877.—First prize, J. Peake; second, G. Perry, Downpatrick.

Pen of five shearing ewes.—First prize, J. Peake; second, J. Peake.

Pen of five ewe lambs.—First prize, J. Peake; second, J. Peake.

PIGS.

COLOURS.

Boar, over twelve months old.—First prize, D. Glenn, Kilsennan, Londonderry (Duke of Ulster); second, M. H. Scott, Aghnasloe (Dobbs).

Boar, over six and not exceeding twelve months old.—First prize, Lord Clermont.

Breeding sow, in pig, or having had a litter within six months, over eighteen months old.—First prize, Lord Clermont; second, D. Glenn, Londonderry (Irish Sally).

Breeding sow, not exceeding eighteen months old.—First prize, Lord Clermont; second, Lord Clermont.

Pen of three breeding pigs of same litter, under ten months old.—First prize, D. Glenn.

WHITE.

Boar, over twelve months old.—First prize, A. Traill, F.T.C.B., Yorkshire (Jupiter); second, T. H. Gratham, Londonderry (Charley).

Boar, over six, and not exceeding twelve months old.—First prize, J. Peake; second, D. Glenn.

Breeding sow, in pig, or having had a litter within six months, over eighteen months old.—T. H. Graham (Sally).

Breeding sow, not exceeding eighteen months old.—D. Glenn (Duchess); second, A. Traill (Venus IV).

Pen of three breeding pigs of same litter, under ten months old.—First prize, T. Lindsay; second, D. Glenn.

FARMERS' CLASSES.

The following classes were open for competition to all the counties in the province of Ulster.

SHORTHORNS.

Cow in calf or in milk, of any age.—First prize, F. and W. Smith (Lady Mose); second, J. Rea, Killiney (Woodbine the Third); third, W. Grey, Lisburn (Leoville).

Heifer, in calf or in milk, calved in 1874.—First prize, J. Russell Mountnorris (Guineahen); second, J. H. Keenan, Downpatrick (Pink Eye); third, T. Lindsey (Lady Audley).

Heifer, calved in 1875.—R. Bowden, Cootehill (Isabella); second, S. Smith, Ballyclare (Cherry); third, J. Perry (Nell Gwynne).

Heifer, calved in 1876.—R. Bowden (Clarissa); second, J. Ferguson, Co. Down (Ruby Queen); third, ditto J. Perry (Annie).

CROSS OR ANY BREED NOT BEING SHORTHORNS.

To be competed for by farmers whose holdings exceed fifty statute acres.

Dairy cow, in calf or in milk, of any age.—First prize, B. Coleman, Templepatrick (Julia); second, G. Gibson, Belfast (Bell); third, F. and W. Smith (Lady).

Heifer in calf or in milk, calved in 1874.—First prize, G. Gibson (White Rose); second, T. Lindsey (Mary).

Heifer calved in 1875.—First prize J. Stewart, County Down (Lizzie).

Heifer calved in 1876.—First prize, J. Perry (Polly); second, J. Russel, (Wildeyes).

CROSS OR ANY BREED NOT BEING SHORTHORNS.

To be competed for by farmers whose holdings do not exceed fifty statute acres.

Dairy cows, in calf or in milk, of any age.—First prize, J. Watson, Londonderry; second, J. M'Clure, Moneyrea (Flora); third, M. Alexander, Ballymoney (Primrose).

Heifer, in calf or in milk, calved in 1874.—First prize, J. Watson; second, H. Megaw, County Down (Strawberry); third, A. Bell, Bangor.

Heifer calved in 1875.—First prize, Hugh Megaw (Miss Warlaby); second, J. Stewart, Island Pole, Killyleagh (Bessie); third, J. Stewart, (Bella).

Heifer, calved in 1876.—First prize, J. Stewart (Kate).

SUFFOLK.

MEETING AT SUDBURY.

The pretty, old-fashioned town of Sudbury did its utmost to justify its selection as the place of meeting of the Suffolk Society on June 28th and 29th. We never remember to have seen a town so tastefully decorated on the occasion of a county show as Sudbury was on Thursday, and, what was more conducive to the success of the meeting, the inhabitants of the town and district were most liberal in the offer of special prizes. The town, however, being on the borders of the county, and with none too-convenient rail accommodation, is not in the most favourable position for a Suffolk show, so that it is not surprising that the attendance was less numerous than at some recent meetings of the Society. The weather was brilliantly fine; but this, owing to the prevalence of haying, was not all in favour of a large attendance.

But, if not so successful financially as some previous meetings, the Show was a remarkably good one, which is a higher form of success than a large taking of money merely. The most noticeable feature of the Show was the creditable appearance of the local breeds of horses, cattle, and sheep. The pigs were good enough, but much less numerous than usual. Of the Suffolk cart horses one always expects to see a grand show at the county meeting. So strong are they, indeed, on their own ground, that, although some of the classes were open to all England, there were hardly any representatives of other breeds. The aged stallions struck us as being not quite so good a lot as we have seen. Mr. Richard Garrett, of Carleton Hall, was first with Viceroy, which was first also at Dis, and Mr. H. Wolton was second. Some of the "knowing ones" would have reversed the positions. There were some very good horses amongst the three-year-old entire colts, Mr. Garrett being again first, with his splendid colt Cupbearer III., which also took the special prize for the best Suffolk stallion in the yard, and the challenge cup, value one hundred guineas, to be won three times in succession by the same exhibitor. Mr. Garrett has now won it twice. Mr. Manfred Biddell was a good second with Ben. Mr. Keer, of Orford, also exhibited in this class a stallion of an excellent stamp, appropriately named Punch. In the two-year-olds Mr. Catepole, of Bramford, took first honours with a colt by Cupbearer II., and showed also one of the biggest and best furnished two-year-olds that we have lately seen, which, however, was disqualified on account of lameness. Mr. A. C. Wilkin's Young King Tom was second, and Cock Robin, a handsome colt, bred and exhibited by Mr. R. E. Loft, of Froston Hall, Bury St. Edmunds, was the reserve animal. The year-old entire colts were not striking. There was a grand show of mares, especially of great mares. The mares with foals at foot were very numerous, and contained some very good specimens, and some that could only have been sent because their foals were pretty good ones. Mr. Wolton, of Newbourne Hall, was first with Newbourne Pride, a grand mare, and second with Royal Diamond. A fine mare, which, with her foal, we fancied

better than the second prize one, was shown by the Earl of Stradbroke, Spright, which was highly commended. The foal is a particularly good one. Mr. J. A. Green's beautiful model of a Suffolk mare, Smart, was first, and gained the special prize in the gait mares. Mr. Cross, of Frating, took the second place with Kathleen, Essex thus carrying off all honours in this very creditable class. Mr. Green was again successful in the two-year-old fillies, in which class he gained the second prize with Pride, which was beaten, in the opinion of the judges, by Mr. Capon's Matchett II.—a very close run we should think. We cannot particularise with respect to the one-year-old colts, and the cart or van pairs. There was a large and creditable show of hackneys and hunters. Amongst the latter, Colonel Barlow's hunter-stallion, The Gunner, which was first at Bath, was beaten by The Beadle, the property of the Duke of Hamilton.

We were pleased to see the Suffolk and Norfolk Polls put in such a creditable appearance at Sudbury. The bulls were very fine specimens of this breed, which might travel beyond their too narrowly confined area with advantage. There were also some pretty cows, and we could not help wondering why strangers who see such creditable specimens of this docile and symmetrical breed, do not more often fall in love with them. The Polls are well suited for "gentlemen's cows," and would, we believe, be more profitable—at least if it were not for fashion, which rules prices to so great an extent—than the much over-rated Channel Islands cattle. As usual, at Suffolk meetings, there was rather a poor show of Shorthorns; but Mr. N. Catchpole, of Bramford, and Mr. D. A. Green, of Donyland, Colchester, shewed some good specimens. There was a fair show of Channel Islands cattle.

The sheep made rather a large show, but only Southdowns and Suffolks were represented to any appreciable extent, no Cotswolds or Leicesters being present, and even Hampshire Downes being few in number. The Suffolks were very good—for Suffolks—and Mr. J. M. Green, of Stradishall, Newmarket, carried nearly all before him. In Southdowns, Lord Braybrooke and Mr. Coleman, M.P., were the successful exhibitors.

Mr. G. M. Sexton, of Wherstead, had a nice show of black pigs all to himself, with the satisfactory result of all prizes and no blanks; whilst in the white breed Mr. R. E. Duckering, of Northope, was the winner of most of the prizes.

The show of implements was not remarkable. Messrs. Howard and Fowler had their steam cultivating tackle at work in fields near the show-yard. The arrangement of the sheds and stands, and the management of the Show generally, were excellent. In criticising the Show, however, we find it desirable, like Paul Pry, to say "We hope we don't intrude," as the Secretary apparently did not desire any press notices.

JUDGES.—AGRICULTURAL HORSES.—J. A. Hampson, Ervarton Hall; D. Sewell, Beaumont Hall. **RIDING HORSES.**—Sir T. B. Lennard, Bart., Belhus; J. Hornsby, Castlegate House, Grantham. **CATTLE.**—A. W. Crisp, Orford; C. Howard, Biddenham. **SHEEP.**—S. Wolton, Baitly Abbey; G. M. Sexton, Wherstead Hall. **PIGS.**—H. Biddell, Playford; A. A. Steward, Yarmouth.

HORSES.

AGRICULTURAL HORSES.

Stallions having served not less than twenty mares in the county in 1877.—First prize, £20, E. Garrett, Carleton Hall (Viceroy); second, £10, H. Wolton, Woodbridge (Royalty).

Three-year-old entire colts, foaled in 1874.—First prize, £15, R. Garrett (Cupbearer III.); second, £7, M. Biddell, Playford (Ben).

Two-year-old entire colts, foaled in 1875.—First prize, £15, N. Catchpole, Bramford; second, £7, A. C. Wilkin, Kelvedon (Young King Tom).

Special prize, value £26 5s., for the best Suffolk stallion in Classes 1, 2, and 3, R. Garrett (Cupbearer III.).

Special prize, the Saxmundham Challenge Cup, value 100 guineas, for best animal in Classes 1, 2, and 3, such animal to have served not less than twenty mares in the county at a fee not exceeding 3 guineas, in 1877—the cup to become the property of the exhibitor winning it three times with the same animal or with other animals bred by himself—R. Garrett (Cupbearer III.).

One-year-old entire colts, foaled in 1876.—First prize, £10, R. C. Cooke, Livermere; second, J. Grout, Woodbridge (Adventurer).

Mares with foals at foot.—First prize, £15, H. Wolton, Newbourne Hall (Newbourne Pride); second, £7, H. Wolton (Royal Diamond).

Foals foaled in 1877.—First prize, £8, M. Biddell; second, £4, Earl of Stradbroke.

Gait mares.—First prize, £10, D. A. Green, East Donyland (Smart); second, £5, Exon, of late W. Cross, Frating (Kathleen).

Three-year-old fillies, foaled in 1874.—First prize, £10, the Duke of Hamilton and Brandon, Easton Park (Belle of the Ball); second, £5, J. Toller (Pearl).

Two-year-old fillies, foaled in 1875.—First prize, £10, R. Capon, Donnington Lodge (Matchit II.); second, £5, D. A. Green (Pride).

Special prize, value £10, for the best animal in Classes 5, 7, 8, and 9.—Prize, D. A. Green, East Donyland (Smart).

One year old cart fillies, foaled in 1876.—First prize, £10, W. Byford, Glemsford; second £5, W. Byford.

Geldings foaled in 1874 or 1875.—First prize, £10, Alfred P. Viall, Cavendish; second ditto, £5, E. L. Baker, Sudbury (Bumper).

Special prize, value £10 10s. for the best pair of plough horses, mares, or geldings, or mixed, not drawn from other classes.—First prize, J. Toller (Captain) (Jolly).

Special prize, value £5 5s. for the best pair of van horses equal to drawing a ton each, suitable for brewers, distillers, or railway work, E. L. Baker (Tinker and Captain).

RIDING AND COACHING HORSES.

Thorough-bred stallions for hunting purposes, having served not less than ten mares in the county.—First prize, £20, Duke of Hamilton and Brandon (The Beadle); second, £10, Colonel F. Barlow, Haaketon (The Gunner).

Roadster stallions, having served not less than ten mares in the county.—First prize, £10 10s., T. Harper, Bury St. Edmund's; second, £5, Col. J. B. Thellusson, Aldeburgh.

Hunting mares, with foals at foot.—First prize, £7, Duke of Hamilton and Brandon (Kitty); second, £3, H. Wolton, Newbourne Hall (Wood Nymph).

Hackney mares, with foals at foot.—First prize, £7, Duke of Hamilton and Brandon (The Spotted Mare); second, £3, J. Grout, Woodbridge (Alice Grey).

Hunting foals, bred in the county, or by the exhibitor.—Prize, £5 5s. Duke of Hamilton and Brandon.

Roadster foals bred in the county, or by the exhibitor.—Prize, £5 5s., Duke of Hamilton and Brandon.

Weight-carrying hunters, mares, or geldings, not less than five years old, equal to carrying not less than fourteen stone.—First prize, £10, Duke of Hamilton and Brandon (Controller); second, Col. F. Barlow, £5, Haaketon (Vandyke).

Four-year-old weight-carrying hunting mares or geldings, having been bred in the county or by the exhibitor, and equal to carrying not less than 14 stone, £10, G. M. Sexton, Ipswich.

Weight-carrying hunting mares or geldings, two or three years old, having been bred in the county or by the exhibitor, and equal to carrying not less than 14 stone. No competition.

Special prize, value £10 10s. for the best light-weight hunting mares or geldings (not to be drawn from other classes.—Prize J. C. Dawson, Ipswich, Limerick).

Special prize, value £10 10s., for the best hunter in the yard.—Prize, The Duke of Hamilton and Brandon, (Controller).

Riding mares or geldings, not under 15 hands high.—First prize, £10, J. Grout, Woodbridge (Kitty); second, Rev. J. Foster, Foxearth, (Tommy).

Hackney mares or geldings, not under 14 hands high, and not exceeding 15 hands.—First prize, £10, Rev. J. Foster (Madge); second, £5, R. C. Cooke, Livermere.

Two and three-year-old hackney mares or geldings, bred in the county or by the exhibitor.—First prize, £7, R. E. Loft, (Zoe); second, £3, G. D. Badham, Balmer (Spinaway).

Ponies not under 13 hands high, and not exceeding 14 hands.—Prize, £5, Duke of Hamilton and Brandon (Bosco).

Ponies under 13 hands high.—Prize, £5, F. Branwhite, Long Melford (Tomtit).

Special prizes for the farmers' hunter making the best jump the first day of the Show.—First prize, £10, J. F. Robinson, Hadleigh (Ploughboy); second, £5, G. Bond, Creetingham Rookery (Watercress).

Special prizes for the best yearling hunter.—First prize, £7, the Marquis of Bristol, Ickworth Park; second, £3, withheld.

Special prizes £5, for the best riding or hackney yearling F. Branwhite (The Gem).

Special prize £5, for the best stallion pony, not exceeding 14 hands high, J. F. Smith, Sudbury (Bright).

Special prize, £10, for the best matched pair of geldings or mares for carriage or pheaon purposes, not less than 14-3 hands high, to be exhibited and driven in double harness, J. Grout, Woodbridge (Allen and Kitty).

Special prize for the best hackney mare or gelding, of not less than 14 hands high, nor more than 15-3 hands high, to be exhibited or driven in single harness—Rev. J. Foster, Foxearth (Madge).

CATTLE.

Suffolk or Norfolk red polled bulls, not exceeding two years old.—First prize, £10 10s., J. Foster Palmer, Wilby (Atleborough (Daveyson third)); second, £5, A. Taylor, Starston, Harleston (Easton Duke).

Suffolk or Norfolk red polled bulls, under two years old.—First prize, £10, J. Foster Palmer, Atleborough (King Charles); second, £5, R. E. Loft (Nelson).

Suffolk or Norfolk red polled bull calves, not exceeding 12 month old.—Prize, £5, R. E. Loft (Duke).

Special prize, value £10, for the best Suffolk or Norfolk red polled bull in the yard.—J. Foster Palmer, Wilby (Daveyson 3rd).

Suffolk or Norfolk red polled cows, in milk or calf.—First prize, £10, R. E. Loft (Minnie 3rd); second, £5, J. J. Colman, M.P., Norwich (Fanny).

Under three-year-old Suffolk or Norfolk red polled heifers, in milk or in calf.—First prize, £10, J. J. Colman, M.P., Norwich (Rosa first); second, £5, A. Taylor, Harleston (Anemone).

Under two years old Suffolk or Norfolk red polled heifers.—First prize, £7, F. J. Coleman, M.P. (Fanciful); second, £3, A. Taylor, Harleston (Angel).

Special prize, value £7, for the best Suffolk or Norfolk red polled cow or heifer, in classes 29, 30, and 31, R. E. Loft (Minnie third).

Special prize, value £10, for the best collection of Suffolk and Norfolk red polled cattle, A. Taylor, Starston.

Shorthorn bulls, not under two years old.—First prize, £10, N. Catchpole, Bramford (Royal Cambridge); second, £5, D. A. Green, East Donyland (Roan Duke).

Shorthorn bulls, under two years old.—First prize, £10, N. Catchpole, Bramford (Amoncan); second, £5, Lord Braybrook (Tablet).

Shorthorn bull calves, not exceeding one year old.—Prize, £5, D. A. Green, East Donyland (King of the Roses).

Special prize, £10 10s., for the best Shorthorn bull in the yard.—N. Catchpole (Royal Cambridge).

Shorthorn cows, in milk or in calf.—First prize, £10, J. Upson, Rivenhall (Countess); second, £5, N. Catchpole (Acacia 3rd).

Shorthorn heifers, under three years old, in milk or in calf.—First prize, £10, N. Catchpole; second, £5, J. R. Chaplin, Halstead (Lady Emma).

Shorthorn Heifers, under two years old.—First prize, £7, D. A. Green (Blush Rose); second, £3, N. Catchpole (Laura).

Special prize £10 for the best animal in Classes 35, 36, or 37, bred in Suffolk or Essex.—N. Catchpole.

Special prize, value £5, for the best three milch cows of any breed, Channel Island cows excluded. No entry.

Bulls of any pure breed, not being red polled, Suffolk or Norfolk, or Shorthorn.—Prize £10, Sir B. Wallace, Bart, M.P., Sudbourne Hall (Heartcase).

Cows or heifers of the Channel Islands breed, in milk or in calf, over three years old.—First prize, £7, J. Everett, Hadleigh, Alderney cow (Rosa); second, £5, Marquis of Bristol, Jersey cow.

Special prize, value £5 5s., for the best heifer of the Channel Island breed under three years old.—J. M. Green, Stradishall, Newmarket, Jersey heifers.

Milch cows in milk not eligible to compete in the foregoing classes.—Prize, £5, G. D. Badham, Bahner (Strawberry).

Special prizes for Jersey bulls.—First prize, G. D. Badham (Hero); Sir B. Wallace, Bart., M.P. (Heartcase).

SHEEP.

Suffolk tups, of any age.—First prize, £7, J. M. Green, Stradishall, Newmarket.

Shearling Suffolk tups.—First prize, £7, J. M. Green; second, £3, J. M. Green.

Suffolk lamb tups.—First prize, £5, J. M. Green; second, £3, J. M. Green.

Pens of five Suffolk shearling ewes.—First prize, £7, J. Smith; second, £3, Marquis of Bristol.

Special prize, value £4 4s. for the best pen of ten Suffolk ewe lambs.—J. M. Green.

Southdown tups, of any age.—Prize, £7, Right Hon. Lord Braybrooke, Audley End.

Southdown shearling tups.—Prize, £7, J. J. Colman, M.P.

Pens of five Southdown shearling ewes.—Prize, £7, J. J. Colman, M.P.

Short or medium-woolled tups, of any pure breed (not being Suffolk or Southdown), of any age.—Prize, £7, Henry Lambert, Great Abington.

Shearling short or medium woolled tups, of any pure breed (not being Suffolk or Southdowns).—Prize, £7 Henry Lambert, Great Abington, Hampshire.

Pen of five short or medium woolled shearling ewes of any pure breed (not being Suffolk or Southdown).—Prize, £7, Henry Lambert, Hampshire down ewes.

Special prize, value £10 £10s., for the best ram in the yard, Right Hon. Lord Braybrooke, Southdown tups.

Pen of ten ewes, of any age or breed, which have had lambs this year. Prize, £5, J. J. Colman, M.P., Norwich, Southdown ewes.

Pen of ten shearling ewes, of any breed.—Prize, £5, Marquis of Bristol, Southdown ewes.

Pen of ten ewe lambs, of any breed.—Prize, £5, J. M. Green, Stradishall, Newmarket, Suffolk lambs.

Special prize, value £10, for the best pen of five sheep, closely shorn, of any breed, bred by the exhibitor in Suffolk or adjoining counties, a sample of wool from the sheep exhibited to be shown with the pen.—Prize, J. J. Colman, M.P.

Special prizes.—Six fleeces of wool.—First prize, £3 3s. H. J. Brand, Great Walsingham, Sudbury; second, £2 2s., E. L. Baker, Balmer Kithcen, Sudbury.

PIGS.

Boars of the black breed, not under one year old.—First prize, £8, G. M. Sexton, Wharstead Hall, Ipswich (Silvio).

Boars of the black breed, under one year old.—First prize, £5, G. M. Sexton (Topsawyer); second, G. M. Sexton (King of Trumps).

Breeding sows of the black breed.—Prize, £3, G. M. Sexton (Lady Golightly).

Pens of three young sows of the black breed, pigged since November 1st.—Prize, £5, G. M. Sexton.

Boars of the white breed, not under one year old.—First prize, £8, R. E. Duckering, Northope, Kirtton Lindsey; second, £4, Right Hon. Lord Moreton, Falkfield (Kenecaly).

Boars of the white breed, under one year old.—First prize, £5, G. M. Sexton; second, £3, S. Spencer, Holywell, St. Ives (Psycho).

Sows and pigs of the white breed (the pigs not exceeding ten weeks old).—Prize £8, S. Spencer (Oh! Joy).

Breeding sows of the white breed.—First prize, £8, R. E. Duckering; second, £4, Right Hon. Lord Moreton (Princess Whitfield).

Pen of three young sows of the white breed, pigged since November 1st.—First prize, £5, R. E. Duckering; second, £3, W. W. Flatt, Wantisden.

Special prize, value £5, for the best boar in yard.—G. M. Sexton (Topsawyer).

Special prize, value £5, for the best sow in classes 58, 59, 63, and 64, bred in Suffolk.—G. M. Sexton (Lady Golightly).

THORNE.

The twenty-fifth Annual Show of this Society was held on June the 20th. The meeting was, on the whole, the most successful the Society has ever held, the entries being more numerous than in any previous year. The following is the list of prizes:—

HORSES.

Agricultural mare and foal.—First and second prize, M. Askren, Levels, Thorne.

Hunter, mare and foal.—First prize, W. Coulman, Barnby Doe; second, F. Appleyard, Grange Farm, Roundhay.

Roadster ditto.—First prize, A. Kirby, High Grange, Market Weighton; second, J. T. Brown.

Agricultural or draught yearling colt or filly.—First prize, J. Orley, Bole Field, Gainsboro'; second, W. Johnson, Hatfield.

Two years old gelding or filly.—First prize, silver cup, W. Bladworth, Luddington; second, R. S. Blundell, Doncaster.

Three years old ditto.—First prize, silver cup, W. Pindar, Haldeby; second, B. Coggon, West Butterwick.

Pair of draught horses, within 20 miles of Thorne.—First prize, silver cup, W. Bramley, Amcotts; second, J. Coulman, J. P., Thorne.

Pair of draught horses.—First prize, silver cup, value £25, J. Coulman; second, ditto.

Gelding or mare, any age.—First prize, J. T. Brown; second, J. Coulman.

HUNTERS.

Yearling colt or filly.—First and second prize, T. Dudding, Garthorpe.

Two years old gelding or filly.—First prize, W. Burton, Eastoft Hall; second, C. H. Hudson, Sandall Grove.

Three years old ditto.—First prize, A. J. Brown, North Elmall Hall; second, the Hon. A. F. Hood, Airmyr Hall.

Gelding or mare, any age.—Silver cup, A. J. Brown.

CARRIAGE.

Yearling colt or filly.—First prize, M. Askren, Levels; second, Mr. Morrell, Hellaby Hall.

Two years old gelding or filly.—First prize, W. Rowbottom; second, W. Spink, Doncaster.

Gelding or mare, any age.—First prize, silver cup value £25, G. Wadsworth, Laxton; second, W. H. Blackman, Wresale.

ROADSTERS.

Yearling colt or filly.—First prize, J. Scriven, Saltair; second, W. Barker, Balne, Ssith.

Two years old gelding or filly.—First prize, A. Kirby; second, J. Benson, Sandtoft.

Three years old ditto.—First prize, W. H. Cranswick, Thorholme; second, D. B. Sowerby, Hull.

Gelding or mare, any age.—First prize, silver cup, value £25, A. J. Brown, North Elmall Hall; second, Dr. Merryweather, Guisbro'.

Weight-carrying cob.—First prize, T. E. Morrell, Hellaby Hall; second, G. F. Fletcher, Sheffield.

CATTLE.

Ball, any age.—First prize, cup, J. Stabbe, Rowley, Walden; second, B. Fletcher, Carlton; third, T. Atkinson, Unsworth.

Ball, not exceeding two years old.—First prize, silver cup, W. Tennant, Barlow; second, A. and R. Mann, Thorahill Dewbury; third, Captain Smith, Harthill.

Ball calf, not exceeding one year old.—First prize, C. Strickland, Sutton-on-the-Forest; second, R. S. Brundell, Doncaster.

Heifer calf, not exceeding one year old.—First prize, H. Fawcett, Old Bramhope, Otley; second, T. Atkinson.

Cow, in calf or milk.—First prize, silver cup, A. and R. Mann; second, T. Atkinson.

Heifer, in calf or milk, under three years old.—First prize, H. Fawcett; second, B. Fletcher, Carlton, Yeadon.

Heifer, not exceeding two years old.—First prize, C. Strickland; second, T. Atkinson.

SHEEP.

One-shear Lincoln ram.—First prize, cup, H. Smith, Cropwell, near Biingham; second, R. Johnson, Westbro', Grantham.

Lincoln ram, any age.—First prize, cup, J. Nelson, Kettleby, Thorpe; second, E. J. Howard, Nocton Rise.

Ditto gimmers.—First prize, E. J. Howard; second, W. Roe.

Ditto lambs.—First prize, W. Roe; second, E. Godfrey, Bank House, Levels.

PIGS.

Boar, any breed.—First prize, J. Hallas, Huddersfield; second, T. Hannam, Leeds.

Sow, any breed.—First prize, J. Hallas; second, T. Hannam.

Gilt, any age.—First prize, J. Hallas; second, T. Parkinson and Sons, Doncaster.

Two store pigs.—First prize, T. Parkinson and Sons; second, W. Winter, Goodcop.

THE AGRICULTURAL COLLEGE, CIRENCESTER.

The honours gained by the successful students were distributed by Earl Ducie, on June the 21st, prior to the commencement of the Midsummer vacation. His lordship observed that the Institution had reached the point in its career when it was possible as well as desirable to see that its education was appropriated to those who were likely to use it to advantage. He was told that the applications for admission were increasingly numerous, which enabled the Governors not merely to select the best, but from time to time to eliminate the idle. The studies of the College had a peculiarity, namely, that in them progress was more easily tested than in the old subjects of a liberal education—Greek and Latin. Many parents could not readily examine their children's proficiency in these, but in agriculture a man's ignorance was easily tested, and the Governors were resolved to prevent as much as possible the scattering over the country of young people who, claiming a knowledge from their residence at Cirencester, would be found quite ignorant of matters which nearly all could test.

The following were the principal awards:—

Diploma awarded to (full marks 1,800) Featonby Jobson Smith, Dalton, Castle Eden, 1,873; William Francis Homfray, West Ketford Rectory, 1,217; Gay Sison Barber, 4, Southrow, Blackheath, London, 1,200.

Holland Medal.—F Eatonby Jobson Smith.

Scholarships.—First Scholarship to Holt, Mollison, Stanes, W.; Second Scholarship to Chesney, Blackie, Tapp.

We are informed that the Chair of Agriculture at Cirencester, sometime back vacated by Professor Wrighton, has been accepted by Mr. J. P. Sheldon, Sheen, Ashbourne, Staffordshire

FRUIT CROPS.—If the experience of other villa gardeners is at all like our own, then there is much reason to fear that but small fruit crops will be realised this year. There was a rich promise of fruit, but crops of all kinds appear to have gone wrong. The gardening times are out of joint, and, as a witty writer remarks, "The weather suggests that March and November have stayed out too late one evening and have lost their way and have found themselves in May. The look of the trees alone makes a fellow miserable. What was pear-blossom is now ugly blackness, and the leaves that had thought of coming out have changed their minds. No respectable tree could get up any enthusiasm towards such a season." Things have a little changed for the better, but there is too much reason to believe that the fruit crop to a considerable extent is hopelessly lost. The peach crop is a general failure.—*Gardener's Chronicle.*

MR. MECCHI'S FARM.—Mr. Mecchi requests us to state that owing to his advanced age (over 75), the Tiptree Annual Gatherings will be discontinued, but he hopes that his brother agriculturists will come and inspect his crops before or during harvest.

with another, to pay for an hereditament, if the tenant undertook to pay all usual tenants' rates and taxes," &c. "The expression 'rateable value,' means the gross value, after deducting therefrom the probable annual average cost of repairs, insurance, and other expenses as aforesaid." That abstraction, with its definition of value, was based in principle on the old Act of William IV.; but that Act was very vague, and obscure, admitting of various interpretations, and one object of this Bill was to make the law more clear, and, he would add, more equitable. Mr. Read proposed to substitute for what he had read the following: "where a hereditament is *bona fide* let for a yearly rent without fine or consideration other than the rent, such rent, and where a hereditament is not so let, then, according to the valuation of the Assessment Committee. Now, he objected to that amendment on three grounds—first, that the Council passed last year a resolution on which objection was taken to the powers proposed to be conferred upon the Surveyor of Taxes, and to the plan for making actual rental the minimum of gross value; that the proposed alteration would increase the power of the Surveyor of Taxes, and would in all cases of tenancy render the existence of an Assessment Committee and Court of Appeal necessary; and, thirdly, that greater injustice would occur under the amended Bill than under the existing one—that is, that the tenant of highly-rented land would, of necessity, have to pay an unfair share of rates, and the tenant of under-rented land would receive an additional advantage to which he could not be considered entitled. He knew that they could not avoid having the Surveyor of Taxes in some way or other, but he wished to take away his sting, and it appeared to him that if Mr. Read's amendment was carried in its entirety, that officer's powers would be greatly increased. That amendment would make actual rent the basis of gross value in all instances.

Captain CRAIGIE remarked that the terms of the amendment did not bear out the expression "in all cases" (Hear, hear).

Mr. J. TURNER said the words were "without fine or consideration other than the rent," and he must leave the meeting to say whether they did not mean actual rent (Hear, hear). He had been twitted with having a hobby on that question, and with trotting out the "poor man." Well, if he had a good "poor man," why should he not trot him out? (laughter). He thought all the injustice done to the "poor man" who paid a high rent would be greater under Mr. Read's amendment than it would be under the Bill as it stood. A man who rented a small piece of land generally paid a higher rent in proportion than one who had a large building, and it would be a great injustice for him to be called upon to pay increased rates as well. With the permission of the meeting he would conclude by reading a letter which he had received from Mr. James Howard, who was precluded by indisposition from being present. It was as follows:

MY DEAR SIR,—For the present I do not deem it advisable to take a part in public discussions orally, but I desire to record my objection to the principle of taking "actual rental" as the gross value. My reasons are that rental varies, not only according to the value of the holding, but by the conditions upon, and the circumstances under, which it is let. Among the various causes I may instance the following. (a). A tenant takes a farm upon the condition that the landlord erects new buildings, underdrains the land, and makes other permanent improvements, at his own cost. In consideration of these advantages the tenant undertakes to pay a proportionately higher rent. (b). A tenant takes a farm, and covenants to make certain permanent improvements, at his own expense, on consideration of which outlay by the tenant the landlord consents to take a proportionately lower rent. (c). Tenants occupying farms upon some ancestral or other estate, the rents of which are notoriously lower than those of adjoining estates, would have an advantage in rates to which they were not entitled. (d). Tenants occupying farms under landlords who, perhaps, from pressing family needs, are obliged to obtain from their tenants the highest possible rent, would have to bear an unfair share of the rates. (e). A tenant has the offer of a farm, on a lease of 14 or 21 years, and in consideration of the security of tenure thus afforded is willing to pay a higher rate than under a yearly tenancy. I have not drawn fanciful or unusual cases, but such as must constantly come under the notice of men of experience. I believe the only proper basis for rental purposes is what the

occupation would reasonably let for, and this for the purpose to which it is applied. This principle will apply to a farm or market garden, a factory, or dwelling house.

I am yours faithfully,

Clapham Park, Beds, June 4th.

JAMES HOWARD.

Mr. BEDALE (Yorkshire), in seconding the resolution, said he was of opinion that if the amendment was carried out the general rating would be much higher than it is at present.

Mr. STRATTON proposed an amendment expressing approval of the amendment in the Bill proposed by Mr. Read. He said he entertained a strong opinion that the only equitable system of rating was that of taking rental as the basis. It must be recollected that the assessment was required for imperial as well as local purposes. The Surveyor of Taxes formed an important element in the consideration of the matter; it was quite certain that he would not allow any man to be rated at less than the actual rental, and if land were rated below the rental the result would be a disturbance of the relations of landlord and tenant, many landlords being thereby told that their land was let lower than it ought to be. The object of the Bill was to secure an equitable assessment, and what better basis could there be for assessment than that supplied by the man who let and the man who hired the farm? He thought there was very little under-rented land, and a great deal of over-rented land; but if a tenant thought it worth his while to pay too high a rent he had no right to complain of a corresponding rating (Hear, hear).

Mr. PELL, M.P., in seconding the amendment, said the Chamber which he represented, that of Leicestershire, was entirely in favour of actual rent being taken as the basis. How could a valuer learn what a farm was worth better than by being guided by the opinion of the two principal parties in the case, the one who let and the one who took it. It would be casting a stigma upon landlords and tenants, and treating them as fools, to suppose that the case was otherwise. He did not deny that there were foolish people to be found among farmers, persons who would rush in before others, and offer too much rent; but legislating for exceptional cases made bad laws (Hear, hear). Generally speaking there were three or four other persons behind who were ready to give the same rent, as the hired land was like meat, and many other things, to be regarded as a matter of bargain. He was not one of those who had had the pleasure of meeting with a number of farms, the rents of which were exceedingly low; and unless they were going to have two assessments, one for taxing and another for rating purposes, it was impossible that there could be any other basis than rental (Hear, hear).

Mr. D. LONG, in supporting the resolution, alluding to the provision in the Bill respecting "Justices in Special Sessions," said he did not see why such persons should oppose the opinion of the Assessment Committee. In cases in which men like himself farmed their own land, and there was consequently no rent, somebody must fix the rating, and he thought it could not be done in a better manner than it would be under the Bill.

Mr. C. S. READ, M.P., said he thought the object of his amendment had been somewhat misunderstood. He did not like taking rent alone as the basis of assessment; but the case was something like that of the ugly woman of whom Sam Weller said that she was better than no woman at all. Seeing an ugly bill he felt that it was better to take rent than to have a Government authority—the Surveyor of Taxes—to step in and put everyone up to the highest level he could. The Chamber had approved of the main principle of the Bill, that of having one assessment for imperial taxes and local rates. No alteration was made by the Bill in that respect. Supposing a man gave 50s. an acre for land which was not worth more than 30s. The Surveyor of Taxes would not say to him, "You have been so ignorant or so foolish as to give a pound an acre more for that land than it is worth, and I will reduce the assessment to what it is worth." On the other hand, the Surveyor of Taxes might, as the Bill stood, apply the screw-jack in raising the assessment on land in the neighbourhood to the high level of that which was let at 50s., when its real value was only 30s., and, therefore, he proposed that the rent should be the basis of assessment. No discretion to reduce was given, by the Bill, to the assessment committee, and the Surveyor of Taxes would be likely to put up the assessment to the highest point. That measure afforded an opportunity of dealing even-handed justice, and he believed

that taking rent as the basis would do the least harm to the greatest number of occupiers, and, if it did not do complete justice, would do something like approximate justice to all.

Mr. W. BIDDLE supported the resolution. Knowing a great deal about the rents in Suffolk, he could state that the rents there were more unequal than the assessments, and he believed Parliament would proceed on a false theory if it accepted individual rents as the main guiding principle for assessments. He wished to learn from Mr. Read whether he meant rent to be taken as the minimum basis of assessment.

Mr. READ said he thought that, when the rent was *bona fide*, no consideration having been paid for lowering it, it should be taken as an absolute basis.

Col. BRISZ, M.P. said he did not admit that the Chamber had expressed a hearty approval of the Bill. He had himself an opposition to a certain kind of Valuation Bill for about fifteen years, and he now found himself at last approving of a similar one (Laughter). Mr. Read's amendment seemed to him to be somewhat of a slur upon the Assessment Committee, and it also appeared to him to be an amendment in the interest of the large occupiers as against the smaller ones. Under the Bill the Surveyor of Taxes would have an opportunity of appealing against any valuation, and if in the opinion of the Assessment Committee the rental was too low, they might put the valuation a little higher.

Mr. READ would ask Col. Brise to put the other side of the case, that of the rent being too high. The Assessment Committee could not then put down the valuation.

Col. BRISZ said he must admit that they could not very easily put it down. The result of an appeal would of course depend very much on the constitution of the Court of Appeal.

Professor WILLIS BUND could not vote either for the motion or for the amendment. It was very improbable that the Valuation Bill would be passed this year, and in his opinion it was not desirable that the Council should for the present commit itself to either of the proposals now submitted to it. He understood Mr. Read himself to say in effect that if the question were now being opened *de novo*, he would not propose that rent should be taken as a basis, and that he proposed it now simply as a choice of evils. The question did not appear to him in a fit state for decision, and it was possible that the Government would introduce a new Bill next session.

Mr. BRAUN (Staffordshire) opposed the amendment because he felt that if it were made an absolute unalterable rule that rent should form the basis of assessment, there would inevitably be great inequality in the rating. In his own parish the rate paid for land of the same quality varied as much as 50 per cent. In one case a gentleman occupying a farm, which belonged to his sister, at a moderate rent, was rated at 40 per cent. above the amount of rent, and when he appealed he was told, in effect, to go about his business. He should like to propose a rider to Mr. Stratton's amendment, to the effect that as in some cases great inequalities existed, it should be in the power of the Assessment Committee to take into consideration any objections which might be raised with regard to the valuation, and that there should be power to appeal against the decision.

The CHAIRMAN observed that the Bill gave that power.

Mr. BEACH, M.P. said some years ago he was very much afraid of rent being taken as the basis of value, because of the effects it seemed likely to produce in the case of hereditaments let from year to year; but a good deal had happened since that time to modify his views. It had been found that the amount received for property tax exceeded that received for rating purposes, and there had been continual attempts to raise the latter to an equality with the former; and that was the reason why a Valuation Bill had been introduced. He could not conceive for a moment that the Surveyor of Taxes would ever consent to value being taken below the amount of rent, and he was quite sure that when that officer was once admitted into consultation with the Assessment Committee, his arguments would be so persuasive that they would be led to adopt his view. As rent, then, was certain to be regarded as the minimum of value, he thought it would be best to make it the basis of assessments (Hear, hear). Rent might not in every case be the actual value, but he thought that on the whole it would be the fairest basis. There might be cases in which small pieces of land were let at a higher rent than adjacent larger pieces, but they must deal with existing circumstances, and bearing in mind that, as a rule, they would have to sub-

mit to the same basis under the Bill, he thought it would be best to make rent, as Mr. Read proposed to do, the basis of value (Hear, hear).

Mr. BELL (Northumberland) supported the resolution, and alluded to the case of colliery lands as a reason for so doing.

Mr. WILLSON said, having been on the Assessment Committee for three Unions including that of Market Harborough and that of Lutterworth, he had had considerable experience in relation to that subject. In the case of the Lutterworth Union the magistrates found the gross assessment £15,000 below what it ought to be in comparison with other Unions, and consequently they upset the arrangement, and, taking rent as the basis of value, raised the assessment by about that amount. Although the owners in that part of the country included one duke, and a great number of peers, he did not find the rent at all too low, and the dearest rented farm which he met with was one let by an old bachelor to his nephew (laughter). His experience showed that nothing could be fairer than to take rent as the basis of value; he had never found any injustice arising from that in the 110 parishes of the three Unions to which he had alluded.

Mr. ARKELL supported the amendment.

Mr. H. NEILD observed that one great object of all legislation should be to make the law as simple as possible, and it was in accordance with that object to make rent the basis of assessment, it being in fact the mainspring as regarded value. There was no secret in the case of rent, the Surveyor of Taxes always knew the amount, and his (Mr. Neild's) experience had convinced him that the value was best arrived at by means of the rent. He did not believe that land was let in many cases at such enormous rents that rent could not be taken as the basis of value, and in his opinion they were rapidly adopting a system which was founded on true commercial principles in regard to that matter.

Capt. CRAIGIE supported the amendment without wishing the Council to be pledged to the adoption of any particular form of words.

Mr. GODFREY was thoroughly opposed to the setting-up of a hard and fast line, and seeing that the tendency of the amendment was to increase rates, considered it opposed to all that had been done by the Local Taxation Committee.

After a few remarks from Mr. WHITAKER-WILSON,

Mr. TURNER replied.

The CHAIRMAN thought that before going to a division the Council ought clearly to understand that the first object of the Bill was to establish a uniform basis of taxation for imperial and local purposes. That being the case, it would, as it appeared to him, be useless to pass the resolution, because if imperial taxes were to depend on the same assessment as local ones no Government and no Parliament would consent to the value being made less than the actual rent. Mr. Read's amendment would mitigate as far as possible the pressure of the increasing power of the Government Surveyor, and it appeared to him that, under the circumstances, the best thing they could do was to accept it.

The amendment was then put and carried, the numbers being 21 for and 17 against.

Mr. D. LONG said that as a majority of the local Chambers were against the amendment, he should demand a scrutiny of the votes.

The amendment having been put as a substantive motion, Mr. BELL moved an amendment to the effect that rent should be taken for the present as the gross value, but that after the establishment of County Boards they should employ county valuers to value hereditaments when the Assessment Committee had reason to believe that inequalities existed.

The amendment having been seconded was put and negatived, only two or three hands being held up in favour of it.

The CHAIRMAN having remarked that some of the Chambers represented at that meeting, being in arrear for subscriptions, were precluded by the bye-laws from voting, Mr. D. Long withdrew his demand for a scrutiny, and Mr. Stratton's proposal was then carried by 20 votes against 15.

Mr. BRAUN then proposed the following: "That the Council supports the proposal to charge income-tax upon rateable instead of gross value."

Mr. CLARK (Bedale) having seconded the motion,

Mr. GODBER observed that it would be a relief to owner and occupier alike if what was now proposed was carried out.

After a few words from Mr. W. BINDELL, and Mr. STARTIN, the motion was carried unanimously.

Mr. NEILD moved "That this Council objects to the Court of Appeal provided by the Valuation Bill, and considers that uniformity of assessment would be best secured by the establishment of representative County Boards."

Mr. STARTIN objected to the proposal in the Bill to establish two courts of appeal, on the ground that such an arrangement would be very complicated. He especially objected to there being an appeal to Petty Sessions, inasmuch as the appeal would, in many cases, be from gentlemen sitting on assessment committees to the same gentlemen sitting at Petty Sessions. His own Chamber had unanimously come to the conclusion that it would be politic for the Government to withdraw the Valuation Bill. Before proceeding with such a measure it should establish County Boards, and then supplement that with a Valuation Bill. Everything would then fall into proper shape. He cordially agreed with Mr. Neild that County Representative Boards would be a far better Court of Appeal than either Petty or Quarter Sessions.

Mr. GODFREY said the Nottinghamshire Chamber adopted a resolution to the effect that the question of valuation should be deferred until County Boards had been formed. At present the Government were going on with the Valuation Bill without appearing to have made up their minds as to what should be the constitution of the Court of Appeal.

Mr. D. LONG said his objection to the Bill rested chiefly on the appeal to the justices in Petty Sessions. He thought it would be a pity to delay the Bill till after the establishment of County Boards.

Mr. W. BINDELL concurred in this view.

Capt. CRAIGIE felt that the appeal to Petty Sessions was the great blot in the Bill, but thought it was scarcely competent for the Chamber to say that a Representative Board would be the best tribunal to hear evidence, and have barristers pleading before it.

Mr. GURDON (Norfolk) cordially approved of the motion.

Eventually the following words were, by consent, at the suggestion of Mr. Ashell, inserted in the motion, after "Valuation Bill," "especially the justices in Petty Sessions," and the motion was then adopted in the following form: "That this Council objects to the Court of Appeal provided by the Valuation Bill, and especially the justices in Petty Sessions, and considers that uniformity of assessment would be best secured by the establishment of Representative County Boards."

The business of the day having thus been brought to a close, the Council adjourned till November.

THE DUTCHMAN AND TRADE.—He did not trouble himself with doctrines about the opening and closing of markets, the balance of trade and the estimate of exports and imports, and the like. His principle in trade was number one. Wherever he could do a profitable job, he undertook it, only calling on the rest of the world to leave him alone. In that same war of the Spanish succession Britain had infinite difficulty in getting the Dutch traders to join in the non-intercourse policy against France, and the allies of France, and that although Britain was safe from absolute attack, while Holland only escaped by the timely arrival of our troops. With the Dutchman, indeed, trade is a sort of religion. He used to be a just trader when the rest of Europe mixed piracy and other forms of rapacity with its transactions. But it was hard to make Meinheer believe that where he could transact a profitable and a perfectly fair job there were reasons why he must let the opportunity pass. Voltaire assures us that in the great war, when the country was only saved by the opening of the sluices, King Louis could never have been so terrible to the Dutch but for the money the Dutch money-lenders had advanced to him, and the innuendoes of war that the Dutch dealers had sold to him. While such things could be told in grave history, there was scarcely malice or injustice in a story fabricated to represent the overwhelming force of the Dutchman's attachment to legitimate, honest trade. It tells how an English and Dutch vessel had a tough contest, when the Englishmen were observed to send a flag of truce to the enemy. The cause was that ammunition had been exhausted—would the Dutchman sell at a highly profitable price a few kegs of powder? When the bargain was completed by delivery of the goods sold, the peppering recommenced.—*Blackwood's Magazine.*

HAY FEVER.—Hay fever is prevalent at this season of the year in many districts, and, if not a malady of the most serious character, it is nevertheless an exceedingly troublesome and unpleasant one; and in the interest of those who are liable to it—and they are very numerous—a discovery which two Continental professors appear to have made between them cannot be too generally known. The victims of this curious epidemic can never venture into the sunshine or get heated by exercise between about the middle of May and the end of June without an attack of violent sneezing, inflammation of the nose, severe headache, and general depression—in short, all the symptoms of a most distressing cold. Prof. Helmholtz observed that the malady was invariably characterised by the presence of very minute infusoria, not unlike the queer little creatures that we sometimes see in rain-water butts, only very much smaller. These he found sticking most tenaciously in the cavities and recesses of the nose, and he noticed that at low temperature they were very sluggish and inactive, and woke up, as it were, when they were warmed. Here, then, was the secret of the disease; but it was Professor Biaz whose investigations suggested the remedy. He found that infusoria might be poisoned by quinine, and of this fact Helmholtz availed himself in his treatment of hay fever, and from which he himself had been a sufferer in the early summer for 20 years. The learned professor made a very weak solution of sulphate of quinine, and laying flat on his back with his head down, he poured a little of it into each nostril, and found instant relief. By occasionally repeating the operation he completely routed the enemy, who, in spite of all his efforts to prevent them, had for so many years thus audaciously taken up their summer quarters, not merely under his very nose, but in it. By this means he could, he found, enjoy entire immunity even in the hottest weather and during the greatest bodily exertion. The remedy is a cheap and simple one, and ought to prove very valuable to those whom this queer affection deprives of half the pleasure they find in a country walk at this delightful season of the year.—*H.S.*

ENERGY AND PHYSIQUE.—There are persons of a nervous temperament who seem to be always upon wires. Nature has given them energy; but their physique is in many cases inadequate to supply the demands made upon it. The steam is there, but the boiler is too weak. Duke d'Alva, according to Fuller, must have been of this nature. "He was one of a lean body and visage, as if his eager soul, biting for anger at the clog of his body, desired to fret a passage through it." The same thought was wittily expressed by Sydney Smith when he exclaimed: "Why, look there, at Jeffrey; and there is my little friend—, who has not body enough to cover his mind decently with; his intellect is improperly exposed." Now these are just the sort of people who should not kill themselves, for though wrapped in small parcels, they are good goods. They owe it as a duty to themselves and others not to allow their fiery souls "to fret their pigmy bodies to decay"—not to throw too much seal into trifles, in order that they may have a supply of life-force for things important. He who desires to wear well must take for his motto "Nothing in excess." Such a one, as we have had occasion more than once to urge, avoids dinners of many courses, goes to bed before twelve o'clock, and does not devote his energy to the endurance of over-heated assemblies. When young men around him have got athletics on the brain, he keeps his head and health by exercising only moderately. He is not ambitious of being in another's place, but tries quietly to adorn his own. "Give me innocence; make others great!" When others are killing themselves to get money, and to get it quickly, that with it they may make a show, he prays the prayer of anger: "Give me neither poverty nor riches," for he thinks more of the substance than of the shadow. This is the truly wise and successful man, and to him shall be given, by the Divine laws of nature, riches (that is, contentment) and honour (that is, self-respect), and a long life, because he did not waste the steam by which the machine was worked. In homely proverb he "kept his breath to cool his porridge," and most probably was a disciple of Isaac Walton.—*Chambers's Journal.*

TO PARENTS AND GUARDIANS.—This, from a late number of the *Times*, is, at least, candid:—"Exchange. A clergyman, near London, who 'prepares for the army,' will take a youth in exchange for his daughter (22)."—*Ibid.*

THE EXTIRPATION OF INSECTS INJURIOUS TO AGRICULTURE.

A Conference was held recently, at the rooms of the Society of Arts, on insects injurious to agriculture. The Duke of Buccleuch, K.G., took the chair, and among the delegates from societies were Mr. P. M'Lagan, M.P. (Scottish Chamber of Agriculture), Mr. Kuowles, M.P. (Cheshire Chamber of Agriculture), Mr. H. Townshend (Chairman of Warwick Chamber of Agriculture), Mr. T. Bell (Newcastle Farmers' Club), Mr. J. Trask (Hampshire Chamber of Agriculture), Mr. E. Scriven (Banbury Chamber of Agriculture), Mr. Mechi (President of The Farmers' Club), Mr. W. A. Wooler (North Yorkshire Chamber of Agriculture), Mr. Dark (Newbury Chamber of Agriculture), Professor Voelcker (Chemist to the Royal Agricultural Society), Mr. C. S. Read, M.P., Mr. W. Beech, M.P., Professor Bentley (Botanical Society), Dr. Maxwell Masters, &c. The proceedings commenced with a paper by Mr. Andrew Murray, F.L.S., who has been entrusted by the Privy Council with the arrangement of the collection of "Economic Entomology" of the Science and Art Department.

We regret that the crowded state of our columns prevents us from giving the full text of Mr. Murray's address; but the following summary, taken from *The Times*, gives some idea of the nature of that gentleman's propositions: The paper commenced by assuming as an axiom that, besides the occasional great injury done by insects, by which whole districts are ravaged, a continual drain is constantly kept up by them, which constitutes a very perceptible percentage of deduction from the cultivators' profits; and, further, that where this loss can be prevented at less cost than the loss it occasions, it should be prevented. It next maintained that if we wish to rid a district or a country of an injurious insect, to be effective, any attempt to do so must be simultaneous and combined, for to what purpose would it be if one man cleared his farm if his neighbour did not clear his, or if the one cleared his one year and the other cleared his another? A central authority, therefore, is needed to secure united action. It next considered the various way in which the insects injurious to agriculture might be extirpated. The first, the simplest, the most powerful, and the most efficient of these is county or district rotation of cropping; farmers know well enough the advantage of a rotation of cropping (or its equivalent) on their own farms. By long-continued growth of the same crop on the same land the soil becomes exhausted of some of the elements necessary for the proper development of that kind of crop, and a change of crop brings other elements into use, and relaxes the demand upon those that have been too much drawn upon. Exactly the converse of this happens with regard to certain insects. The great majority of vegetable-feeding insects do not feed on all kinds of plants indiscriminately; most of them are restricted to one kind of plant, and if by cultivation of that plant its numbers are enormously increased, so will naturally be the number of the insects that feed upon it; while if we should cease to grow that plant, the number of the insects would correspondingly diminish. Thus, for instance, if a district is almost entirely in pasture, there will be very few wheat-feeding insects in it, but if it is turned into a wheat country, they will be in myriads. Most of the wheat insects are only annuals. If they could be banished for one year, they would be banished entirely, or until re-introduced. Now, if there were a controlling authority, what would be easier than to say to the farmers, "Gentlemen, in the common interest you will substitute barley for wheat in your next year's rotation." The insect, deprived of its proper nidus, must then either lay its eggs in an unsuitable place where they will perish, or have recourse to the pasture fields for *triticeum repens*, or other suitable grasses. By this, of course, the fly would not be exterminated, but its numbers would be so reduced as to render it comparatively harmless. Mr. Murray then went over the various other means of extirpation—picking and burning infected plants, the collecting caterpillars, and poisons, and local remedies. He also pointed out how essentially this was, in the first instance, a tenant's or cultivator's question, for it is upon him alone that the whole loss from insects falls.

The CHAIRMAN, whilst admitting that great injury was done by insects, said that he was a great disbeliever in the theory that small birds were very injurious. He moved the following resolution, which was carried: "That thanks are

due to the President and Lords of the Privy Council for having brought the subject of insect damage under the consideration of the agricultural bodies of the kingdom."

Dr. MASTERS moved: "That much of the loss occasioned by insects is preventable, and ought to be prevented." He was of opinion that the extent of the injury caused by insects had been under rather than over estimated. One of the great necessities of the time was that there should be more information on the subject, for farmers and gardeners did not know sufficiently what was good and what was harmful for them. If they were not to be left behind in the race of the present day, they must follow the example of America, and have a state entomologist to collect information as to the insects which were and which were not harmful.

The resolution having been seconded and carried,

Mr. J. J. MACH proposed: "That it properly belongs to Government to provide the necessary means for protecting cultivators from this loss, as it is only by combined and simultaneous action over considerable districts that it can be effectually done, and Government alone possesses or can obtain the requisite means of enforcing such action." Mr. Mechi contended that the damage done by insects was far greater than most people thought. In his own district the destruction by wireworms had almost destroyed the wheat crop. He believed, however, that the loss sustained from the wireworm and the slug was preventable. As a practical farmer of twenty-five years' experience, he was of opinion that birds were the farmer's best friends.

Dr. VOELCKER seconded the resolution, and enforced the necessity of the appointment of a state entomologist. The Government had much more power for doing good in the way of imparting sound information about insect life than any private society. But still it was highly desirable that the great national agricultural societies should follow in the wake of the Royal Horticultural Society, which was the means of imparting a great deal of instruction on the subject.

Mr. C. S. READ, M.P., opposed the motion, observing that whenever the Government interfered in such matters they were the cause of loss, and their interference was detrimental rather than beneficial. He suggested that, instead of belonging to Government, it properly belonged to the leading agricultural societies to suggest the necessary means for the protection of cultivators from the loss. He did not know what the Government had to do with the matter, and he did not want them to interfere.

The resolution of Mr. Mechi's was ultimately carried; and before the meeting separated it was resolved to inform the President and Lords of the Privy Council of the opinion of the meeting, and to urge upon the Council to take the subject into their consideration with a view to providing a remedy.

THE ROYAL AGRICULTURAL BENEVOLENT INSTITUTION.

On Wednesday, the 20th June, this Society held its Annual General Meeting at Willis's Rooms, to receive the Annual Report of the Council for the year ended on the 31st December, 1876, and for the election of Officers and Pensioners. Mr. J. J. Mechi presided. Messrs. Marten, Collins, Cantrell, and Johnson, retiring Members of Council, were re-elected. The Earl of Dunmore, Mr. Clare Sewell Read, M.P., and Mr. Robert Leeds were elected in place of Messrs. Brandram and Wagstaff retiring, and Mr. Baldwin, deceased. The cordial thanks of the Meeting were voted to the Earl of Dunmore for presiding at the Anniversary Festival, to the Honorary Local Secretaries, and the Auditors. The Secretary was then called upon to read the Annual Report, as follows:—

In presenting their Seventeenth Annual Report to the supporters of the Royal Agricultural Benevolent Institution, the Council are happy to draw attention to the same steady increase in the income, arising from subscriptions and donations, by which the progress of the Society has been characterised since its formation.

At the present election forty-four new Pensioners will be added to the list of Annuitants, at an annual cost of £928, thus raising the total yearly expenditure, under the head of Pensions and School Payments, to close upon £10,000, as shown by the following figures, viz:—

74 Males	costing.....	£3,048
45 Married Couples	"	1,800
234 Females	"	4,480
14 O.Togenarians	"	300
54 Children	"	1,296

amounting in the aggregate to £9,924.

The Council feel, therefore, that they may justly congratulate the friends of the Society, not only on account of the gratifying increase in the funds already alluded to, but also upon the large number of Pensioners they are thereby able to maintain, especially when viewed in connection with the shortness of the Society's existence. But while giving due prominence to an aspect of affairs in itself so satisfactory, it should, nevertheless, be borne in mind that the amount to be expended is still considerably in excess of that accruing from subscriptions and donations, and will tax to the utmost every available source of income—circumstances which, when coupled with the further fact that the number of applicants shows a tendency rather to increase than diminish, calls for continued exertions on the part of all those who recognise the objects already achieved by the Society, and realise the necessity of extending its benevolence. The Council are glad to be able to announce the following charitable bequests made to the Society since the publication of the last Balance Sheet, viz:—£1,000 by the late Mr. George Moore, of Bow Church yard, London; a similar sum by Mr. Thomas Congreve, of the Salisbury Hotel; £100 by Mr. H. S. Dixon, of Witham, Essex; and £50 by Mrs. Tyler, of Norwich; at the same time they deeply regret to record the decease of Mr. James Coombes, of Stevenston, Berkshire, a liberal subscriber of £100 a year.

The following is a list of successful candidates at the last election:—

MALE PENSIONERS AT £26 PER ANNUM EACH.

	votes.		votes.
Hammond, J.	346	Garrett, W.	187
Bolla, J.	301	Burrows, T.	171
Stacey, G.	272	Fortnum, W.	169
Lake, W. H.	190	Johnson, F.	169

MARRIED PENSIONERS AT £40 PER ANNUM EACH.

	votes.		votes.
Sharp, W.	867	Alsop, J.	411
Sharp, M. A.	462	Alsop, E.	410
Hollis, J.	462	Warner J. W.	410
Hollis, S.	438	Warner A.	407
Topham, J.	414	Nockolds S.	407
Topham, M.	414	Nockolds F.	403
Ardley, J.	414	Wright, J.	403
Ardley, S.	414	Wright, M. A.	403

FEMALE PENSIONERS AT £20 PER ANNUM EACH.

	votes.		votes.
Harding, M. A.	383	Roper, S.	336
Smith, M. A.	382	Edwards, M.	333
Akerman, L. M.	370	Fisher, E.	330
Hilder, M. A.	364	Capon, D.	316
Kindred, J.	359	Higgins, H.	306
Sutton, M. A.	354	Brown, P.	303
Linkhorn, F.	353	Parry, A.	297
Daykin, A.	346	Welsh, P.	294
Fremlin, M. A.	341	Ayling, M.	294
Rose, E. W.	336	Rollinson, P.	294

THE FOLLOWING ORPHAN CHILDREN WERE ALSO ADMITTED.

Sidney Budd	William Alfred Astill
Charles Deml	Bernard Ream Cole
Allen William Andrews	Peninnah Florence Marriotts
James Flint	Hope Dibben
John Earnest Reeve	

A HERD-BOOK FOR AYRSHIRE CATTLE.

At a meeting held at Ayr on June 26th, the Hon. G. R. Vernon in the chair, it was resolved that a Society for establishing an Ayrshire Herd-book should be formed. A number of gentlemen were named to form a committee, and several subscriptions were promised. The wide support already received augurs well for the success of the new Society. An Ayrshire Herd-book is, without doubt, greatly needed.

DARTMOOR.—It is not merely the stir and movement of the city which have been left behind. We have taken our farewell of the life of civilisation and humanity; it is Solitude herself who receives us now; it is the Abomination of Desolation which beckons us forward, telling us, 'as plainly as words can speak, that we have left joy, hope, all that flavours existence, behind. Have not those who have travelled this stern unlovely road, winding weary mile after mile through the bleak moor peopled only by fantastic shapes of granite, through rugged joyless valleys, and over the crest of grim hills, known by the influence of the place, which has made itself felt unbidden, without looking forth on the landscape around, that each revolution of the labouring wheel was taking them deeper into the heart of a country reigned over by the silent relentless Nemesis of crime? Never surely had that power a more fitting palace; never had palace a more suitable antechamber; never was the approach to it proclaimed by emblems more significant. Granite barriers divide its remotest precincts from social existence. Leadens and weeping skies overhang its domain; shrouds of mist, driven by the wild gusts of wind, obscure the landscape and deepen the gloom. Few cattle find pasture in the stunted herbage. There are streams and torrents rushing down the steep gullies, swollen by recent rains; but of tree and shrub, no trace. The grey mist-crowned tops look down upon an occasional homestead in ruins; here and there on a cottage whence men and women go forth to their labour in the morning; at rare intervals on a group of toilers of the soil, silently and unheeding busied with spade and pickaxe on a barren desolity. No carolling lark, high in heaven, cheers their labour; instead, birds of evil omen, the raven and the crow, hover in the air, or settle on the broken surface of the moor. When the little town of Tavistock, the local capital of the house of Russell, has been left some half-dozen miles behind, when every loophole through which any glimpse of humanity and civilisation could be caught has been effectually closed up, a sudden turn in the road, just past the model dwellings of the stone-quarriers to the right, reveals the palace—that palace which is a prison—lying in a basin formed by the hills. It is the present home of the 'unhappy nobleman.' A collection of bare walls, with the small iron-barred slits which are called windows, enclosing narrow courts; a clock-tower in the centre; an entrance-arch, over which is the inscription *Perere Subjectis*—surely it should have run, in modern Italian, *Lasciate ogni speranza*, &c; nearly opposite, perched on a commanding eminence, from which the country for miles round is visible, a signal-tower, guarded by sentinel-warders night and day, to remind the prisoners, as they see it from the yard below, or as they look up at it from the fields or roadways, when they are marched out to hedge and to ditch, to dig and to build,—that to attempt to escape is a desperate game, not on the whole worth playing; this is Dartmoor Prison. The village, which lies scattered about it, seems denominated by the influence of the establishment. Gangs of criminals are working at different points, and at different kinds of open-air industries, under the supervision of officers of the prison, who watch them every moment. Elsewhere one encounters a detachment of some two dozen slowly tramping to or from their cells, dragging it may be, some heavily laden 'trolley,' subject to the same kind of lynx-eyed generalship. Not a word escapes their lips; but those who are versed in such communications may detect the interchange of signs, a forefinger extended or a thumb depressed which conveys a whole sentence in their mute vocabulary. Apparently they take no heed of what goes on around them. Yet there is not a person who passes unobserved by the eyes so practised in cunning glances, not a new face or fresh arrival in the village which is unrecorded in their mental visitors' list. The children, in whom the place abounds, see the dismal spectacle of the men of ill-favoured countenance, clad in the prison-dress, working or marching past with no emotion of pity or wonder. That the centre piece of their village should be a gaol, and that upwards of a thousand of its population should be a convicts, must seem as natural to these Dartmoor boys and girls as the heavenward-pointing tower of the solemn fanes, the daily services, the clerical processions, to those whose cradle is a cathedral town. Prisoners' base must be the favourite game of these children; a prison-wardenship their ambition; a prison-cell the stereotyped parental threat in their fractious and rebellious hours.—*The World*.

AGRICULTURAL SOCIETIES.

SHORTHORN.

A Meeting of the Council of this Society was held at the Society's Rooms, 12, Hanover Square, on Tuesday, the 3rd ult. Present: Lord Skelmersdale in the chair, the Duke of Manchester, Colonel Gunter, Colonel Kingscote, C.B., M.P., Colonel Loyd-Lindsay, M.P., Mr. H. W. Beauford, Mr. F. J. S. Foljambe, M.P., and Mr. G. Merton-Tracy.

The following new members were elected:—

Balfour, Arthur James, Whittingham, Prestonkirk, N.B.
Dunn, Frederick, Keyingham, Hull.
Fortescue, A. Irvine, Kingcausie, Aberdeen.
Jardine, James, Dryfeholm, Lockerbie, Dumfries.
Mortimer, William Brook, Hay Carr, Lancaster.

EDITING COMMITTEE.—Colonel Kingscote reported that a portion of the proof of the bulls for vol. 23 of the Herd Book had been received, and the Committee hoped that the volume would be issued before Christmas.

That the Committee had received an application from a member of the Society to change the name of a cow, already entered in the Herd Book. The Committee recommended that this application be refused, as had been done in previous cases, as they considered that the practice would inevitably lead to much confusion.

This report was adopted.

GENERAL PURPOSES COMMITTEE.—Colonel Kingscote reported that the accounts for the month of June had been examined by Messrs. Quilter, Ball, and Co., and the Committee, and were found to be correct.

The Committee also reported that the Secretary's petty cash account had been examined and passed, and showed an expenditure of £18 4s. 11d. during the past month, and that the receipts for the month of June had been £64 17s., the balance of the Society's current account at the bankers being £294 16s. 8d., and £500 on deposit.

That the sum of £1,000 had been invested in Three per Cent. Consols, as directed by the Council at its last meeting.

The Committee also reported that the annual audit of the Society's accounts to 31st December, 1876, was held on the 27th ult., and that an abstract of the cash account and a copy of the balance-sheet were now laid upon the table.

The Committee reported with regret that several members of the Society were already in arrear with their subscriptions, several applications having been made to them without any response. The Committee therefore recommended that one more application be made by the Secretary to every member in arrear, informing him that unless payment be made by 31st August next the matter will be placed in the hands of the Society's solicitor.

This report was adopted.

On the motion of Colonel Kingscote, C.B., M.P., seconded by the Duke of Manchester, the Earl of Feversham, of Duncombe Park, Yorkshire, and on the motion of Mr. H. W. Beauford, seconded by Colonel Gunter, Mr. Samuel Porter Foster, of Killbow, Cumberland, were unanimously elected members of the Council, in the place of Mr. R. E. Oliver and Mr. George Savill, resigned.

The draft of the report to the annual general meeting of members was read and adopted.

The following communication from the Royal Agricultural Society was laid before the meeting:—

Royal Agricultural Society of England,
12, Hanover Square, W., June 9th, 1877.

DEAR SIR,—I have the pleasure of informing you that I

submitted your letter dated Tuesday last, to the Council of the Society on the following day, when I was instructed to inform you that your Society may hold their annual meeting of members in the tent used as a members' club in the show-yard at Liverpool, on the day and at the hour mentioned in your letter.

Any details in connection with this meeting should be settled by you with the Society's contractor.

I remain, yours very faithfully,

H. M. JENKINS, Secretary.

H. J. Hine, Esq., Secretary Shorthorn Society.

The annual general meeting of members of the Society will therefore be held in the Royal Agricultural Society's show-yard at Liverpool, on Thursday, July 12th, at noon.

The next meeting of the Council was fixed for Tuesday, July 31st, at 3 p.m.

ESSEX.

MEETING AT CHELMSFORD.

There was a very good show of horses and cattle at Chelmsford, on the 4th and 5th of July, and, judging from the thronged appearance of the rather small show-yard, we should think the exhibition was a financial success. In point of quality the Show was, on the whole, not up to the very high level of the grand collection of stock gathered at Colchester last year, but that was an exhibition of very exceptional merit for a country show. The entries were—horses 431, against 398 last year; cattle 201, against 240; sheep 71, against 66; and pigs 25, against 27. The number of implement entries is not given in the catalogue, but there was a very good show for a country society.

Of the agricultural horses it may be said that the show gave greater credit to the managers of the Society, who, by opening several classes to the competition of the United Kingdom, attracted a number of the best horses in the country, than to the local breeders, whose exhibits, on the whole, showed a great falling-off as compared with those of past times. There were, however, a few notable exceptions, and with the help of a strong contingent from Suffolk, Class I., for stallions of any age, competing for the Chelmsford Town Prize of £50, offered to the best agricultural stallion which will travel in the county, and open to the United Kingdom, was a large and strong one. The prize was awarded to Paragon, described as "pure shire bred, out of a celebrated mare by British Ensign," Paragon's sire being Columbus, g.s. Admiral, g.g.s. Matchless. This powerful horse, although entered as Mr. Chas. Clayden's, is the property of a company of farmers in the Bishop Stortford district, who combined to purchase two horses to use amongst their own mares—a very wise example in co-operation. The competition was between this horse and Major Garrett's Suffolk stallion Cupbearer III., which won the champion prize at Sudbury. It is a difficult task to judge between two horses of different breeds, and the judges were a long time in coming to a decision, but we think they were quite right. In spite of the beauty of the Suffolk horse, his rival has more bone, is altogether a heavier and more powerful animal, and is better suited for getting horses that will not only plough well but sell well also. In this class Mr. H. Bulttaft showed King Tom by Honest Tom, a fine-topped, massive horse, with indifferent legs. Class II., for Suffolk stallions three years old and upwards, was a fairly good though small class. Major Garrett won both prizes, the first with Cupbearer III., and the second with

Viceroy. The most generally meritorious class of agricultural horses was the third, for stallions, not Suffolk, open to the United Kingdom. The choices lay between three superb stallions—Mr. Wynn's Nonpareil by A 1, out of Matchless, by King of the Valley, took first honours, as he did in the aged-stallion class at Birmingham last year. He is a massive bay, nine years old, and therefore in full maturity, and there was no doubt as to his being all over a winner, though the friends of the Bishop Stortford horse hoped their favourite might stand first. They may, however, be well satisfied that he secured the second prize, as there were many round the ring who would have put in his place Mr. Dove's splendid three-year-old Ajax by Hercules, by Heart of Oak. This horse, for his age, is one of the best we have seen lately, and we question whether his successful rivals were as good when they were youngsters. A young horse, however, has little chance when competing with older, and therefore more fully furnished, competitors. The country two-year-olds were a poor lot, and do not speak well for the local sires of the future. Essex will certainly have to import from other counties.

In Class V., for two-year-old colts, open to the United Kingdom, the Suffolks, as in all other instances in which they had to compete with outsiders, were beaten, Mr. Catchpole's Sudbury winner having to give way to Topman, the property of Mr. C. Masters, of Saddlebow, King's Lynn, Mr. Houlding's of Tolleshunt, D'Arcy taking the second prize for Essex. The special prize for the best horse in the preceding classes was won, as a foregone conclusion, by Nonpareil. There were only two indifferent yearling colts. There was a fair show of cart mares in Class VII., but the first prize was won by one of the least meritorious out of the best half-dozen. Mr. Jones's Violet is a plain mare, with a narrow chest, bad back and shoulders, and ungainly head. Only her legs and hind quarters were good, and the judges were certainly wrong for once in putting her above such a beauty as Mr. D. A. Green's victorious Smart, which only took the second prize, though first in a better class at Sudbury. In the class for mares of four-year-old and upwards, open to the Kingdom, the Suffolks were nowhere, there being at least three mares better than a Suffolk could be. Mr. Beart's Lioness, by Nonpareil, is a magnificent mare, with such bone and muscle as are seldom seen. She deservedly took the first prize, though a good deal of judging was required in comparing her merits with those of Mr. Wynn's Queen of Trumps, a magnificent dapple grey, active as a hackney. Messrs. Stanford, of Steyning, Sussex, also showed a grand mare in this class. The pairs and fillies were not remarkable, and the mares and foals were about an average lot, with some very good ones amongst them. Mr. Wolton, of Woodbridge, being first with Royal Diamond, a Suffolk mare, and her foal—the only instance in which a Suffolk stood first in any of the open classes.

Of hunters and hacks the show was a very large and meritorious one, but as our space is quite insufficient to do them justice in a detailed criticism, we will not attempt it.

Coming now to the Shorthorns, we have to speak of a good show, both in point of numbers and quality, though not equal in excellence to the extraordinary lot which we saw at Colchester last year. In the aged bull class there was not very much competition. Pertwee of Boreham, was first, and Mr. Anderson, of West Thurnock, second. In the two-year-olds we only fancied one, Mr. D. A. Green's Roan Duke by Heydon Duke II. In class XXXVI, for yearling bulls, Mr. Sturgeon was first with Oxford Crocus, and Mr. Christy second with the, in this case, appropriately named Secundus. In yearling bulls, open to the Kingdom, Lady Pigot's Bath winner, the Beau, was beaten by Mr. Linton's FitzArthur by Sir Arthur Ingram. There were only three bull calves, Mr.

D. A. Green being first, and Col. Brise second. Class XXXIX, an open one for bulls of any age, was well filled. Mr. W. Linton's gigantic Sir Arthur Ingram was placed first, and took also the 100 guinea challenge cup for the best Shorthorn in the yard. This bull was second to the Marquis of Exeter's Telemachus 6th at Colchester last year. The second prize fell to Major-General Fytche for Royal Charmer's Duke, Mr. St. John Ackers' Clovis, commended at Bath, being unnoticed by the Essex judges. In the class of cows of any age, Mr. Upson, of Rivenhall, showed a very nice one, Countess, which took first prize, with Mr. Green's Lovely for a second. Countess also won the Chelmsford Town prize, open to the Kingdom, for the best cow or heifers not under three years of age, beating Mr. Ackers' Queen of the Georgians, a well-bred roan noticed in our report of the Bath Show, and the Marquis of Exeter's Telemacina. Mr. D. A. Green was first and Mr. Chaplin, second in a small country class of two-year-old heifers. Lady's Pigot's beautiful Imperious Queen deservedly took the place of honour in the open class, as she did at Bath, Norfolk, and Doncaster, and at many shows last year. Mr. D. A. Green secured a great advance in his growing reputation as a Shorthorn breeder by taking the first prize in both the local and the open class for yearling heifers with Blush Rose, a promising heifer, by Young Telemachus, out of Bramford Rose, beating in the latter class, Lady Pigot, Mr. Linton, Mr. St. John Ackers, and other breeders. He was also first in a class of two heifer calves, Mr. Christy being second. The Marquis of Exeter won the prize for the best bull and cow with calf with Telemachus 6th, Telemacina, and Telemacina 2nd. For yearling bull with pair of yearling heifers Lady Pigot took the honours. There was a large show of the Channel Islands breeds in spite of the recent dispersion of Mr. Gilbey's herd, the most noted in the district. Some of the animals were beautiful specimens of their kind.

The show of sheep was, as usual at the Essex meetings, a short one, whilst that of pigs was the worst we have ever seen at any agricultural county meeting.

The implement show was, as before remarked, a large one. Messrs. Fowler, Howard, and had some of their steam tackle at work in fields near the show-yard.

PRIZE LIST.

JUDGES.—CART HORSES: J. H. Plowright, Isle of Ely; M. Biddell, Ipswich; H. Giles, Thetford. RIDING AND COACHING HORSES: Lord Portsmouth, Devon; Sir G. Wombwell, London; J. M. K. Elliott, Towcester. SHORTHORNS: F. Loney, Kent; H. W. Beauford, Thrapstone; J. Thompson, Chippenham. CHANNEL ISLANDS AND DAIRY CATTLE: G. W. Baker, Luton; R. M. Jary, Wixoe. SHEEP AND PIGS: J. C. Clayden, Beccles; R. J. Newton Woodstock. DONKEYS: J. F. Bott, Danmow.

HORSES.

AGRICULTURAL.

Stallions.—Chelmsford Town Prize, £50, C. Clayden, Bishop Stortford (Paragon).

Suffolk stallions, three years old and upwards.—First prize, £20, Major R. Garrett (Cupbearer the Third); second, £10, Major R. Garrett (Viceroy).

Stallions (not Suffolk), three years old and upwards.—First prize, £20, W. Wynn, Stratford-on-Avon (Nonpareil); second, £10, C. Clayden, Bishop Stortford (Paragon).

Two-year-old colts.—First prize, £10, R. Houlding, Kelvedon; second, £7, A. and F. Fyson, Chelmsford (Young Thumper).

Two-year-old colts.—First prize, £15, C. Masters, King's Lynn (Topman); second, £8, R. Houlding.

Special prize, for the best animal in Classes 1 to 5, £25, W. Wynn, Stratford-on-Avon (Nonpareil).

Yearling entire colts.—First prize, £7, J. Jillings, Saffron Walden; second, £5, W. Belcher, Chelmsford (Young Sandonian).

Cart mares, four years old and upwards.—First prize, £8, W. Jonas, Heydon Bury (Violet); second, £5, D. A. Green, East Donyland (Smart).

Cart mares, four years old and upwards.—First prize, £10, C. Beart, Downham Market (Lioness); second, £8, W. Wynne, Stratford-on-Avon (Queen of Tramps).

Pair of cart mares.—Prize, £31, D. A. Green, East Donyland (Smart).

Two-year-old fillies.—First prize, £8, F. Asplin, East Tilbury (Boxer); second, £5, D. A. Green, East Donyland (Pride).

Yearling fillies.—First prize, £7, H. W. Petre, Chelmsford; second, £5, P. B. Vincent, Colchester.

Fillies (under four years).—First prize, £10, E. and A. Stanford, Steyning (Maggie).

Mares and foals (Chelmsford town prizes).—First prize, £15, T. W. Lambert, Ongar (Bonny); second, £8, ditto (Ripey).

Mares and foals.—First prize, £15, H. Wolton, Woodbridge (Royal Diamond); second, £7, T. W. Lambert (Bonny).

Foals.—First prize, £5, T. W. Lambert; second, £3, ditto.

Special prize.—For the best female animal in the above classes—cup, value 10 guineas.—C. Beart, Downham Market (Lioness).

THOROUGHBREDS AND HUNTERS.

Thoroughbred stallions.—Prize, £15 with £10 added, Colonel F. Barlow, Woodbridge (The Gunner).

Hack stallions.—First prize, £15, J. Groat, Woodbridge, (Reality); second, £8, J. Groat (Honesty).

Weight-carrying hunters.—Prize, £20, T. D. Ridley, Chelmsford (Kildare).

Weight-carrying hunters, (Chelmsford town prizes).—First prize, £20, T. D. Ridley, Chelmsford (Kildare); second, £10, J. W. Wakelin, Braintree (Benedict).

Weight-carrying hunters, up to 14 stone, the property of a bona fide farm tenant, farming not less than 100 acres in the county of Essex.—Prize, £21, J. W. Wakelin, Braintree (Benedict).

Light weight hunters.—First prize, £15, Sir T. B. Lennard, Bart., Romford (Governess); second, £10, A. W. R. Brize, Witham.

Four year-old hunters.—Prize, £10, J. W. Wakelin, Braintree (Benedict).

Hunting mares with foals.—Prize, £10, D. Christy, Chelmsford.

LEAPERS.

Chelmsford town prizes.—First prize, £10, P. C. Barker, Ingatestone (Polite); second, £5, F. Young, Chelmsford (Lady Clarissa); third, £5, M. A. Freestone, Dunmow (Little Emily).

HACKNEYS.

Hackney mares or geldings, not exceeding 15 hands 1 inch, Chelmsford town prizes.—First prize, £15, S. Marriage, Broomfield (Coquet); second, £10, J. Christy, jun., Writtle (Blanche); third, £5, C. P. Wood, Kelvedon (Laughable).

Hackney mares, or geldings.—Prize, £15, S. Marriage (Coquet).

Four-year-old riding mares or geldings.—Prize, £10, J. Christy, jun. (Will Scarlett).

Three-year-old riding mares or geldings.—Prize, £8, G. D. Badham, Sudbury (Spinaway).

Hackney mares, with foals at foot.—Prize, £10, W. J. Beadel, Chelmsford (British Queen).

Hackney mares or geldings, not under 14 hands 3 inches to be shown in single harness.—First prize, £10, Rev. T. Atkins, Halsted (Shamrock); second, £5, W. Lucking, Great Waltham (Rocket).

Ladies' riding horses.—First prize, £10, Sir T. B. Lennard, Bart., Romford (Governess); second, £5, J. O. Parker, Woodham (Muaketeer).

Cobs.—First prize, £10, R. C. Cooke, Bury St. Edmunds (Eclairer); second, £5, W. J. Beadel, Chelmsford (Soda).

PONIES.

Ponies.—First prize, £8, T. D. Ridley, Chelmsford (Monkey); second, 4s, S. Young, Chelmsford.

CATTLE.

PURE SHORTHORNS.

Bulls.—First prize, £15, J. Pertwee, Boreham (Crown Prince); second, £7, G. Anderson, Romford (Baron Havering, 4th).

Two-year-old Bulls.—First prize, £25, (including £15, Chelmsford town prize), D. A. Green, East Donyland; (Roan Duke); second, £15, J. R. Chaplin, Halsted (Biddewell Duke).

Yearling Bulls.—First prize, £10, C. Stargess, Romford (Oxford Crocus); second, £7, J. Christy, Roxwell (Secunda).

Yearling Bulls.—Prize, £15, W. Linton, York (Fitz Arthur).

Bull Calf.—First prize, £7, D. A. Green, East Donyland (King of the Roses); second, £5, Lieut-Col. S. B. B. Brize, M.P., Braintree (Sweet William).

Bulls, of any age.—First prize, £20, W. Linton, York (Sir Arthur Ingram); second, £10, Major-General A. Fyche, C.S.I., Havering-atte-Bower (Royal Charmee's Duke).

Cows.—First prize, £15, J. Upson, Witham (Countess); second, £10, D. A. Green (Lady).

Cow or heifer, not under 3 years old. (Chelmsford Town prize).—Prize, £20, J. Upson (Countess).

Two-year-old heifers.—First prize, £10, D. A. Green (Myrtle Flower); second, £7, J. R. Chaplin, Halsted (Lady Emma).

Two-year-old heifers.—Prize, £10, Lady Pigot, Weybridge (Imperious Queen).

Yearling heifers.—First prize, £10, D. A. Green (Blush Rose); second, £7, D. McIntosh, Romford (Charmers 39th).

Yearling heifers.—Prize, £10, D. A. Green, East Donyland (Blush Rose).

Heifer calf.—First prize, £8, D. A. Green, (Myrtle Leaf); second, £6, J. Christy, Roxwell (Miss Liverpool).

Yearling bull and pair of yearling heifers (Chelmsford town prize).—Prize, £20, Lady Pigot (The Beam).

Bull and cow, with calf, their offspring, the latter calving after June 1st, 1876.—Prize, £30, the Marquis of Exeter, Stamford (Telemachus 6th).

The Second Havering Park Challenge Cup.—For the best pure-bred Shorthorn in any class. Value 100 gu., to be taken three years in succession before it becomes the property of any exhibitor.—W. Linton, York (Sir Arthur Ingram).

Shorthorns (without pedigree).—First prize, £7, G. D. Badham, Bulmer (Strawberry); second, £5, A. Durrant, Chelmsford (Snowdrop).

Heifers under three years old. First prize, £7, J. Blott, Essex (Nelly); second, £5, J. O. Parker (Raspberry).

Pair of yearling heifers (Chelmsford town prize).—Prize £10; J. O. Parker (Raspberry).

The best animal in classes 49, 50, and 51 (Chelmsford town prizes).—First prize, £10, J. Blott (Nelly); second, £5, J. O. Parker (Raspberry).

DAIRY CATTLE (without pedigree).

Cows in milk (Chelmsford town prizes).—First prize, £13, G. D. Badham (Strawberry); second, £8, A. Durrant (Snowdrop); third, £5, H. C. Wells, Chelmsford.

CHANNEL ISLANDS BREEDS.

Bulls exceeding two years old.—First prize, £10, The Earl of Rosalyn, Dunmow (Grindstone); second, £5, G. D. Badham (Hero).

Bulls, not exceeding two years old (Chelmsford town prizes).—First prize, £10, H. Cheffins, Dunmow (Jersey); second, £5, W. J. Beadel, Chelmsford (Dairy King).

Cows, exceeding three years old (Chelmsford town prizes).—First prize, £10, W. J. Beadel (Scalakin); second, £5, W. J. Beadel (Buttercup).

Heifers, not exceeding three years old.—First prize, £10, W. J. Beadel (Darling); second, £5, Rev. M. Shaw, Bury St. Edmunds (Lilac).

Heifers, not exceeding two years old.—First prize, £10, E. B. Gibbon, Saffron Walden (Maid of Athens); second, £5, The Earl of Rosalyn (Queen Bee).

Jersey cow or heifer, with calf by her side.—Prize, £10, W. J. Beadel (Darling).

SHEEP.

Southdown ram, any age.—First prize, £8, Lord Braybrooke, Saffron Walden; second, £5, J. J. Colman, M.P., Norwich.

Shearling Southdown ram.—First prize, £10, Lord Braybrooke; second, £7, Lord Braybrooke.

Shortwool ram, any age.—Chelmsford Town prize, £8, J. M. Green, Newmarket.

Shearling shortwool ram.—First prize, £8, G. Street, Ampt-hill; second, £4, J. M. Green.

Pen of five shearling Southdown ewes.—First prize, £7, F. M. Jonas, Saffron Walden; second, £5, J. J. Colman, M.P.

Pen of five shearling shortwool ewes.—First prize, £8, H. Lambert, Cambs; second, £5, T. F. Buxton, Warr.

Shearling Lincoln or Leicester ram.—First prize, £8, T. Gannell, Cambs; second, £4, C. Sell, Lincoln.

Cotswold, Lincoln, or Leicester ram, any age (Chelmsford Town prize, £8).—Major-General A. Fytche, C.S.I., Haveriggale-Bower.

Shearling Oxford or Shropshire ram.—First prize, £8, G. Street (Oxford Down); second, £4, G. Street (Oxford Down).

Pen of five shearling Oxford or Shropshire ewes.—Prize, £5, G. Cooke, Cambs (Shropshire).

Pen of five shearling longwool ewes.—Prize, £5, T. Gannell (Lincoln).

Pen of five ewes, with lambs.—First prize, £6, H. Lambert, Cambs (Hampshire); second, £4, J. Smith, Woodbridge (Suffolk).

Pen of three fat Southdown wethers.—Prize, £5, Lord Braybrooke.

Pen of three fat longwool wethers.—Chelmsford Town prize, £5, T. Gannell (Lincoln).

Pen of four shortwool lambs (Chelmsford Town prize, £5).—F. M. Jones (Southdown).

PIGS.

Boar, large breed.—Prize, £5, W. H. Walker, Brentwood.

Sow in pig, large breed.—Prize, £5, D. Christy, Chelmsford.

Three sow pigs, large breed.—Prize, £5, D. Christy.

Boar, Essex breed.—Prize, £5, W. Thompson, Colchester.

Sow in pig, Essex breed.—Prize, £5, W. Belcher, Chelmsford.

Three sow pigs, Essex breed.—Prize, £5, W. Foster, Leigh.

Boar, small black.—Prize, £5, T. F. Sewell, Colne Engaine.

Sow in pig, small black.—Prize, £5, T. F. Sewell.

Boar, small white.—Prize, £5, G. D. Badham, Bulmer.

Sow in pig, small white.—Prize, £5, G. D. Badham.

Sow and pigs, large breed.—Prize, £5, A. F. Packeridge, Chigwell.

Sow and pigs, small breed.—Prize, £5, G. D. Badham.

Boar, small breed.—Prize, £5, G. M. Sexton, Ipswich.

RIPON AND CLARO.

The fifteenth annual exhibition of the Ripon and Claro Agricultural Society was held on July 6, at Bishopton. Compared with former years the show was an exceedingly good one, though the entries were not so numerous as they might have been. Nevertheless, with the exception of the classes for pigs and poultry, there was an increase in the number of entries, when compared with last year's show, in every department. The entries in 1876 were made up as follows:—Cattle, 45; horses, 151; sheep, 15; pigs, 27; poultry, 105; dogs, 168. This year the entries were:—Cattle, 40; horse, 163; sheep, 32; pigs, 19; poultry, 121. The Shorthorned cattle throughout were deserving of commendation, especially in the bull and calf classes. A special prize of £5, for the best bull, two years old and upwards, was carried off by Mr. Geo. Yeats, Studley, Ripon, with a roan animal named "Cherry Crown." The second prize was awarded to "Hutton Conyers," an animal belonging to Mr. Wm. Harland, Blois Hall, Ripon. There were only three competitors for the Marquis of Ripon's special prize of £5 for the best bull above one and under two years of age, which was secured by a promising looking animal belonging to Mr. H. Fawcett, Old Bramhope, Otley. "Maggie Mildred," a heifer, also belonging to Mr. Fawcett, was the means of securing Mr. J. Yorke's special prize of £5, though she was closely followed by "Gratefull," owned by Mr. T. H. Hutchinson, Catterick. In the horse department the two-year-old colts and fillies were good classes, and the ponies were very promising. Draught horses and brood mares possessed considerable merit. The hunters and roadsters class contained some really splendid animals, the winner of the first prize, £5, for the best hunting gelding or mare under six years old, being "Perfection," the property of Mr. J. C. Bilton, Huttons, Ambo, York. A special prize of £10 for the best four-year-old gelding or filly for hunting brought out a strong field. The winner was a bay, belonging to Mr. J. Smith, of Humberston, Boroughbridge, and though it has never been shown before, it gives promise of future success. Much interest appeared to be centred in the jumping competition, and several very close contests ensued. £10 was offered for the best leaper, gelding or mare, of any age, which was won by a seven-

year-old bay, "Ernest," the property of Mr. Handley Taylor York, thus adding another to its many well-earned laurels. "Whalebone," a five-year-old, belonging to Major Stapylton York, was a good second. It may be stated that the winner last year secured twenty-six first, two second, and one third prize, amounting in value to about £450. This year, it has already won five first prizes. Pigs, sheep, and poultry formed interesting features of the show, and included several specimens of a highly commendable character.

LIST OF PRIZES.

The judges: For horses—hunters, R. Batty, Tollerston, Easingwold, and T. Ellerby, Whitwell, York; harness, R. Wade, Darlington, and J. S. Stowell, Darlington. Cattle, S. Rowlandson, Darlington, and T. Dodds, Wakefield. Sheep and pigs, W. Ripley, York, and W. Robson, York.

SHORTHORNED CATTLE.—Bull, two years old and upwards, 1, G. Yeats, Studley; 2, W. Harland, Blois Hall, Ripon. Bull, above one and under two years old, 1, H. Fawcett, Old Bramhope, Otley; 2, J. T. Robinson, Leckby Palace, Thirsk. Bull calf, under twelve years old, 1, J. T. Shutt, Harrogate; 2, T. Strickland, Thirsk Junction. Cow or heifer, in calf or milk, three years old and upwards, 1, T. H. Hutchinson, Catterick; 2, T. Strickland. Heifer, in calf or milk, above two and not exceeding three years old and upwards, 1, H. Fawcett, Otley; 2, T. H. Hutchinson. Heifer, above one and under two years old, 1, Lady Mary Vyner, Newby Hall; 2, G. Meynell, Northallerton. Heifer calf, under twelve months old, 1 and 2, C. Mason, Dishforth. Cow for dairy purposes, 1, T. S. Mason, Ripon; 2, G. Whitton, Kirklington.

HORSES.—(Open to all England.)—For the field.—Brood mare with foal at foot, 1, M. Wilkinson, Thirsk; 2, J. T. Robinson, Thirsk. Three-year-old gelding, 1, W. Scott, Boroughbridge; 2, D. Batty, Helperby. Three-year-old filly, 1, R. Mothersill, Northallerton; 2, J. Wood, Bedale. Two-year-old gelding or filly, 1, J. T. Robinson; 2, W. Scott. Yearling colt or filly, 1, J. T. Robinson; 2, T. H. Foden, Ripon. For harness.—Brood mare with foal at foot or stunted, 1, T. Highmoor, Ripon; 2, R. Pullan, Hartwith. Three-year-old gelding or filly, 1, G. Knowlson, Thormanby; 2, H. Fawcett, Otley. Two-year-old gelding or filly, 1, G. Thompson, York; 2, L. Mansfield, Thirsk. Yearling colt or filly, 1, J. H. Webster, jun., Northallerton; 2, H. Stanwix, Ripon. For the road.—Brood mare with foal at foot or stunted, 1, W. Norfolk, Catterick; 2, J. Ridsdale, Harewood. Three-year-old gelding or filly, 1, W. H. Cranswick, Thornholme; 2, W. B. Pearson, Marton-le-Moor. Two-year-old gelding or filly, 1, F. Barroby, Dishforth; 2, T. Francis, Thirsk. Yearling colt or filly, 1, C. Lancaster, Bedale; 2, E. Hodgkinson, Topcliffe. For the farm.—(Special prize, Brood mare with foal at foot, 1, J. F. Crowther, Mirfield, 2, J. T. Shipley, Ripon. Three-year-old gelding or filly, 1, I. Denison, Harewood; 2, R. Pearson, Hutton Conyers. Two-year-old gelding or filly, 1, B. Tweedie, Catterick; 2, W. Harland, Ripon. Yearling colt or filly, 1, J. Ingledew, Beadle; 2, C. Nicholson, Littlethorpe. **HUNTERS AND ROADSTERS.**—Hunting gelding or mare, not more than six years old, 1, J. C. Bilton, Hutton Ambo, York; 2, J. B. Booth, Killerby, Catterick. Special prize.—Four-year-old gelding or filly for hunting, 1, J. Smith, Humberston; 2, E. Hall, Barton. Leaper, gelding or mare, of any age, 1, H. Taylor, Askham; 2, Major Stapylton, York; 3, E. Wrigglesworth, Wetherby; 4, G. Taylor, Boroughbridge. Roadster, gelding, or mare, to be mounted if required, 1, W. H. Cranswick, Thornholme; 2, J. Marryweather, Guisborough. **POINIES.**—Pony, not exceeding 14 hands, to be mounted if required, 1, J. Morley, Dishforth; 2, J. T. Robinson, Leckby, Thirsk. Pony, not exceeding 13 hands, 1, J. Smith, Humberston; 2, J. T. Benton, Ripon.

SHEEP.—Leicesters or Long Wools.—Ram of any age, Messrs. Dovenor, T. Bedale; 2, W. Yeats, Ripon. Pen of three shearling gimmers, 1, F. Hough, Bedale; 2, F. B. Greenwood, Ripley. Pen of three shearing wethers, W. B. Pearson, Marton-le-Moor; 2, P. Stevenson, Rainton. Pen of three shearling gimmers of any other breed, or a cross, 1 and 2, J. Green and Son, Silsden. Pen of three shearing wethers of any other breed or a cross, 1, T. Scott, Boroughbridge; 2, R. Pearson, Hutton Conyers.

PIGS.—Boar of any age of the large breed, 1, Graham, Leeds; 2, E. Hodgkinson, Topcliffe. Sow of any age of the large

breed, A. Metcalfe, Hamphwaite; 3, E. Hodgkinson. Boar of any age of the small breed, G. Mangles, Grendale; 2, J. Graham. Sow of any age of the small breed, 1 and 2, G. Mangles. Cot-ager's pig, such cottager-paying under 25 rent, and resident within eight miles of Ripon. W. Strodger, Matton Conyers; 2, C. Thirkill, Marton-le-Moor.—*Abridged from the Leeds Mercury.*

METEOROLOGICAL NOTES.

TO THE EDITOR OF THE MARK LANE EXPRESS.

SEN.—The 1876 rainfall was thus measured at the following places, viz.—At Andover, in Jan. 1.70 inches; Feb. 3.00; Mar. 3.08; Ap. 2.52; May 0.23; June 2.67; July 0.83; Aug. 4.71; Sep. 4.57; Oct. 0.55; Nov. 3.21; Dec. 6.85; inches.—Total 26.72 inches. At Oxford for these months respectively, the rainfall was 1.08; 2.91; 3.27; 2.78; 0.75; 1.90; 0.62; 2.88; 4.40; 1.02; 3.07 and 4.87 inches.—Total 31.00 inches. At Cam-bridge, 2.03; 2.31; 2.19; 2.11; 0.46; 1.80; 1.18; 1.63; 4.36; 1.04; 2.57; and 3.80 inches.—Total 25.30 inches. At Ipswich, 1.11; 2.38; 2.75; 1.61; 0.93; 1.68; 0.98; 1.22; 6.59; 4.21; 6.77; and 0.80 inches.—Total 39.78 inches. At Felgimouth, 1.07; 3.58; 3.92; 2.91; 0.85; 1.16; 0.89; 1.22; 3.57; 1.15; 3.40; and 3.87 inches.—Total 27.10 inches. At Torrington, 1.59; 3.78; 5.91; 3.76; 0.30; 2.21; 1.45; 4.46; 7.02; 4.23; 3.84; and 0.43 inches.—Total 35.17 inches. At Taunton, 0.80; 3.66; 4.61; 3.22; 0.28; 1.45; 0.73; 2.40; 5.69; 2.90; 4.54; and 2.63 inches.—Total 39.10 inches. At Chaseldon, 3.69; 3.66; 3.68; 4.07; 1.41; 2.91; 3.41; 2.42; 5.98; 3.98; 4.03; and 6.37 inches.—Total 41.40 inches. At Ashby-de-la-Zouch, 1.87; 2.88; 3.24; 3.41; 0.70; 2.49; 1.55; 2.64. No returns for Sep., Oct., Nov., or Dec. Total for 8 months 18.72 inches. At Ebbw, 4.16; 7.08; 5.24; 2.83; 0.86; 4.53; 2.10; 4.01; 4.73; 0.98; 4.01; and 10.58 inches.—Total 58.51 inches. At Portmadoc, 2.47; 5.57; 3.53; 4.40; 0.68; 2.64; 4.21; 3.22; 4.13; 4.06; 5.38 inches. No return for Dec.—Total 41.76 inches. At Cogan, 3.30; 5.14; 5.81; 1.60; 0.81; 3.09; 2.76; 4.64; 5.41; 6.40; 3.64; and 7.04 inches.—Total 47.32 inches. At Rhng Corwen, (N.W.) 1.21; 4.65; 4.45; 4.43; 0.88; 1.28; 2.99; 4.22; 4.82; 4.07; 5.57; 4.22; and 7.19 inches.—Total 48.06, say 48 inches. At Bangor, 5.87; 6.37; 7.13; 4.20; 2.11; 4.99; 3.16; 4.69; Sep., Oct., Nov., Dec., no return.—Total 6 months, 37 inches. Ireland, at Tralee, 4.99; 2.89; 4.72; 2.89; 1.11; 2.89; 1.78; 3.80; 3.93; 4.15; 4.07; and 6.06 inches.—Total 41.76 inches. At Kilkenny, 0.69; 4.33; 3.18; 2.24; 0.81; 1.21; 1.26; 3.73; 2.99; 4.69; 3.79; and 6.05 inches.—Total 35.81 inches. At Twyford, near Athlone, 1.62; 4.46; 4.07; 2.59; 0.68; 1.09; 1.53; 4.69; 6.57; 4.22; and 7.19 inches.—Total 48.06, say 48 inches. At Ballinacole, 3.98; 2.49; 0.67; 1.51; 1.57; 4.32; for 6 months March to August. Sep. no return. Oct. 4.53; Nov. 3.07; Dec. 5.35 inches.—Total 27.08 inches. 9 months at Cahirciveen, Jan. 3.33; Feb. no return; Mar. 4.46; Ap. 4.60; May, 0.83; June, 2.66; July, 2.35; Aug. 5.64; Sep. 7.11; Oct. 6.36; Nov. 6.18; Dec. 8.90 inches.—Total 51.64 inches. At Cork, 2.04; 4.36; 3.63; 3.20; 0.85; 0.85; 1.24; 2.91; 2.34; 6.68; 7.26; and 8.16 inches.—Total 46.85 inches. Waterford, 2.24; 6.20; 3.63; 2.76; 0.57; 1.36; 1.61; 3.48; 5.76; 7.02; 6.0; and no return for December.—Total 46.85 inches. In July, at Aldiscombe, 0.397 inches fell in 6 days; 0.110 inch. on 25th at Worthing from 9 a.m. to 3.30 p.m.; 1.17 inches of rain fell on 20th August 1876. At Watford, from 31st Aug. to 7th Sep. 3.86 inches of rain fell. On 19th Aug. near Bristol, 3.870 inch. fell from 2 p.m. until 9 a.m. on 20th. At Cowes, on the 26th Sep. a destructive tornado was experienced, Harley was whisked over the sea to the Hampshire coast, from the Isle of Wight. It lasted 2 minutes, and a girl was ejected for several yards upwards. At Camden Town, London, the 1876 rainfall was in Jan. 0.94 inch; Feb. 1.97; March, 2.96; April, 1.90; May, 0.94; June, 1.27; July, 0.62; Aug. 1.79; Sep. 2.90; Oct. 1.40; Nov. 3.07; Dec. 6.25 inches.—Total 26.17 inches. At Maidstone 1.91; 2.66; 1.83; 0.99; 0.99; 0.70; 3.62; 3.31; 1.32; 2.33; and 5.16 inches.—Total 26.80 inch. At Selborne (The Wakes) 1.43; 3.67; 3.66; 3.26; 2.10; 0.63; 0.92; 3.71; 5.32; 2.11; 4.59; and 9.77 inches.—Total 41.57 inch. At Banbury, 1.73; 2.26; 3.40; 2.71; 0.31; 2.17; 0.70; 2.75; 1.39; 1.71; 4.45; 0.81; 2.69 and 3.97 inches.—Total 28.46 inch. At Norwich, March, 2.93; 2.93; 0.94; 1.80; July, August no returns; Sep. 5.07; Oct. no return; Nov. 2.76; Dec. 3.25.—Total 7 months, 19.00 inch. At Bridport, 1.38; 3.49; 3.10; 2.59; 0.29; 2.91; 0.82; 2.99; 5.64; 2.27; 6.92; and 4.52 inches.—Total 40.86 inch. At Barnstable, 2.13; 3.93; 5.40; 2.83; 0.61; 1.26; 1.27; 2.74; 6.77; 3.56; 3.63; and 6.91 inches.—Total 39.96 inch. At Bodmin, 1.63; 4.21; 4.40; 3.56; 0.29; 1.75; 0.99; 4.44; 6.29; 3.97; 5.06; and 12.69 inches.—Total 61.34 inches, of which one-fourth fell in December. At Leicester, 1.87; 2.78; 2.81; 2.83; 0.60; 1.91; 0.84; 2.10; 5.80; 1.65; 2.99; and 4.86 inches.—Total 30.61 inch. At Boston, Lincolnshire, 1.82; 2.31; 2.42; 4.40; 0.84; 3.13; 1.60; 1.74; 2.4; 1.17; 2.56; and 4.26 inches.—Total 31.46 inches. At 13.46 inches. At Manchester, 1.74; 3.98; 3.70; 1.08; 3.10;

1.08; 2.15; 3.57; 3.07; 3.17; 2.40; 4.44 inches.—Total 34.71 inches. At York, 1.03; 2.15; 3.23; 1.63; 0.71 (No return for June); 2.0; 1.67; 5.08; 2.47; 3.11 (No return for Dec.).—Total 10 months, 22.96 inch. At Cardiff, Feb. 6.30 inch. Haverfordwest, 3.12; 5.04; 3.57; 2.63; 0.32; 1.97; 2.86; 4.63; 7.62; 7.39; 6.99; and 8.16 inches.—Total 63.40 inch. A Machynlleth, North Wales, 3.26; 0.23; 4.99; 2.46; 0.68; 1.26; 5.41; 5.69; 6.13; 5.40; 6.03; and 7.71 inches.—Total 61.26 inches. At Llandudno, 1.19; 3.01; 2.69; 3.08; 0.28; 1.16; 3.22; 2.75; 4.4; 3.07; 5.60; and 4.17 inches.—Total 34.40 inches. At Dumfries, N.B., 3.98; 5.06; 3.66; 3.70; 0.82; 3.11; 1.79; 3.67; 2.84; 4.68; 3.65; and 6.68 inches.—Total 43.29 inches. At Braemar, 1.61; 2.40; 4.21; 2.53; 1.23; 3.14; 1.67; 2.43; 2.55; 2.88; 2.66; and 6.79 inches.—Total 37.02 inches. At Portree, Skye, 11.87; 6.07; 7.90; 4.37; 2.94; 7.74. (No return for July) 4.37; 3.17; 6.13; 3.23; and 6.31 inches.—Total 61.20 inch. At Killisnoe, in Feb. 62.20; 5.89; March, 6.03; May, 1.36; June, 3.16; July, 1.23; Aug., 4.65; Sept., 6.30; Oct., 4.42; Nov., 3.98; Dec. 5.24.—Total 10 months 41.93 inches. At Trevelick, St. Austell, 1.43; 5.08; 5.41; 3.22; 0.24; 1.46; 1.24; 4.08; 6.33; 4.71; 6.16; and 12.33 inches.—Total 53.61 inches. At Addington Manor, 2.02; 2.54; 3.63; 3.96; 0.67; 1.69; 0.62; 2.37; 4.81; 1.34; 3.60; and 5.03 inch.—Total 33.24 inches. At Hemmery-Tor-Dartmoor, 3.70; 0.64; 6.30; 7.25; 0.45; 3.94; 3.44; 6.98; 12.77 (Sept.) 7.61; 6.94; and 31.91 inches in Dec. Total 92.97 inches for 1876. At Inverness, Culloden, 0.88; 2.08; 4.01; 5.28; 0.76; 2.12; 2.24; 1.60; 3.64; 2.63; 1.78; and 1.25 inches.—Total 26.96 inches. At Sandwick, 3.88; 1.56 (no return for March) 2.23; 4.33; 1.45; 3.15; 2.56; 3.18; 1.80; 4.70; 5.95 inch.—Total 34.84 inch. At Stirling, total rainfall for 1876 except June, unrecorded, 29.85 inches. At Cirencester, 39.50 inches. At Grimsby (Killingholme), 31.81 inches. At Mansfield, 35.23 inches. N. Shields, 30.91 inches. Borrowdale (Beathwaite), 30.91; 16.31; 12.63; 6.04; 2.06; 8.34; 4.05; 9.77; 6.23; 7.28; 6.0; 18.31 inches.—Total 1876, 146.83 inch. At Herwick, N.B., 37.83 inches. At Kilmarnock (Annarhill), 37.94 inches for 10 months. (No returns for May and June). At Castle Howard, 48.34 inches for eleven months. (No return for Dec.) At Newport, Isle of Wight, on April 11th and 12th, an inch of snow fell; temp. 45 deg. At 4.45 p.m. on 12th soft hail; temp. 39°. St. Catherine's Down was covered with snow. At Staines, "snow rollers" were observed, an unprecedented event in England according to Mr. Symonds, although at Sandwick in Orkney, this fact has been noted frequently. In the Midland Counties this snow-storm prevailed considerably. On the 22nd of June at Brighton, 1.90 inches of rain fell, from 8 p.m. on 22nd, till 9 p.m. on 23rd. The total is stated to be the greatest recorded there. At Warrington the fall was 0.80 inches. At the Dyke 2.15 inches fell. On the 21st a heavy thunderstorm occurred at Liverpool, 4 p.m. On 11th Dec., 1875, a fine meteor was observed from the ship "Crocodile," 13.30 N. Long., 63.30 E. at 6.45 p.m. A streak of light appeared aloft, about 15 deg. above the horizon, and 30 deg. N. of W. It extended upwards about 25 deg. in zig-zag form, and it seemed to form 7 letters of a word. At the lower end the streak was 1½ feet broad, and thinner and approached the Zenith. On 21st Feb. an aurora was observed at Whitehaven. A fine meteor was observed at Berne, Switzerland, on 8 November at 5 h. 33 m. or 5 h. 3 min. Greenwich time, temp. 45 deg. Fahr. by Mr. M. F. Ward, F.R.A.S. Between 13 Feb. and 29 March, 1876, 8.60 inches of rainfall occurred at Muswell Hill. Rain fell on every day from 20th of Feb. to the 16th of March. A hail-storm occurred at Leamington on 31st of March, stones as large as pebbles. In April a meteorite nearly 8 lbs. weight fell near Wellington, Salop. On 20 May, 1.48, a fine meteor was observed at Kilburn, near London. At Ashley, near Bristol, the rainfall from Aug. 19 to 16 Oct. was 13.66 inches in 1876. In 1875, from Sept. 19 to 20 Nov., 85.943 inches; and in 1874, from Aug. 6 to 7 Oct., 13.821 inches. Mr. G. Symonds's Meteorological Record should be seen by rural observers. Stanford, of Charing-cross, sells it. I am, sir, yours, &c.

CHRYSTOPHER COOK.

A TIGRESS AT LARGE.—A fine tigress was killed near the London and North Western Railway, at Long Buckley, recently. The station-master at Weedon was informed of the escape of a tiger between Wolverton and Rugby, on its way to Liverpool, and that it was prowling about the field near. He gathered some friends, and, with some officers from the Weedon Garrison went to the spot on an engine. The animal was discovered near the line, her movements having been watched from a telegraph post by a porter who had sighted her. A number of country people, acting as beaters, she was finally despatched after receiving no less than eight rifle bullets, beside several charges of small shot. The animal in question belonged to Mr. Jamrack, of Ratcliff-highway, and was despatched by the 8.20 train from Broad-street in what is called a "low-sided junction wagon." While at large it had managed to kill and partly devour a couple of sheep.

THE ANNUAL MEETING OF THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND AT LIVERPOOL.

One of the most successful meetings ever held by the first agricultural society in the world is that which terminated on the 16th of July. The live stock entries have been exceeded in number on two or three occasions, but the entries of implements and miscellaneous exhibits exceeded even the large entry at Birmingham last year. The Show-yard in Newsham Park was admirably adapted for its purpose, the only fault, if fault it can be called, being that there was too much room. Standing on high ground, it was refreshingly airy, and as the sky was clouded over for the greater portion of the Show-week, the coolness was very gratifying to those who had much work to do. The arrangements were admirable, and reflect great credit upon the managers of the various departments.

The attendance was very satisfactory up to Saturday, which was a wet day. On the first day the visitors numbered 6,673, against 6,891 at Birmingham last year. On Thursday, the first half-crown day, the number amounted to 25,074, a considerable advance over the 19,889 on the corresponding day at Birmingham. On Friday 22,981 persons paid their half-crowns, against 17,414 on the same day last year. A large additional number of season-tickets have been sold. On Saturday the attendance was 51,333, being about 7,000 short of that at Birmingham last year. This falling off was doubtless owing to the wet weather.

THE HORSES.

The stabling, stand, and rings, are excellent, and admirably arranged, while punctuality is the order of the day, for soon after nine there are three sets of judges at work. But, as we pass from ring to ring, so much do the horses differ in character and substance that we cannot make a guess at what their first parents were like, or even the couple Noah took into the Ark, though we have a distinct recollection of two cart stallions at the first Royal meeting at Oxford. And there, as if but yesterday, is the grey with his hairy legs waddling after the chesnut between the shedding; old Davis, the cattle painter, laying the color on thick, taking the portrait of the chesnut—the jolly dinner party in St. Giles's; and the race horse with "the four spanking tits and good heavy load," which "Puffing Billy" has driven off the road, and after them has gone a regiment of show-goers whose ranks have been filled up and multiplied until the puny meeting at Oxford has grown into the gigantic one at Liverpool. Still the world goes merrily round like the horses, some of us choosing the pace of the thoroughbred, too fast to last, others that of the bustling hack, continually on the trot, and some jog on with the measured step of the cart-horse, slow but sure, and, perhaps, the best in the long run. Therefore we give precedence to the agricultural horse, more especially as he is to have a stud-book, like his distant relative the thoroughbred, wherein will be given, no doubt, the pedigree of the seventy times seven Champions, Conquerors, and Captains, with their buxom ladies, the Beauties, Roses, and Darlings of England. But "a breath has made them as a breath can make" for a favorite pedigree with dealers some years ago was "got by Whalebone out of a well-bred mare," and we have seen three or four half-bred stallions awarded thoroughbred stallions' prizes. No wonder this, when a thoroughbred stallion is often given the prize for picking up his feet like a coach-horse, as most short-armed horses will do, while the beauty of a thoroughbred is to have knees and hocks near the ground. The agricultural classes were well represented with Shire

horses, Clydesdales, and Suffolks, which made a grand show, some of the classes being extraordinarily good. In fact, the cart horses were much better represented than at Manchester in 1869, whose strength was in thoroughbreds, hunters, and hacks, the weak part of the Liverpool Show, though there were names among the few as well known in the ring as those of Wombwell and his lions Wallace and Nero were at the fairs in days of yore. The all-aged stallions foaled before the 1st January, 1875, not qualified to compete as Clydesdales or Suffolks, and which for brevity we shall describe as Shire horses or mares, were as grand, or grander than even at Bedford or Birmingham we almost fancy. Still, the handsome thick-set Young Samson, glorying in all his hair and power, is the same horse, though greatly improved, that was picked out at Birmingham last year to travel North Warwickshire, and that was proclaimed the best of all the agricultural stallions in the yard at Bath, as he was later in the day here. He was bred by Mr. Richardson, Chatteris, Cambridge. Then one equally handsome, but differently built, is the lengthy, powerful, short-backed Nonpareil; and though not to be excelled at Birmingham last year, he does not get the apple here, but only the second best. He first saw the light at Evesham, Worcester, and was bred by Mr. Malin, while his owner's name and address will be found in the prize list. Third honours were given to Young Champion, whose poor feet seem to be all right again. He is a great hero, and at one time was wont to contest for honours with Honest Tom and Le Bon, the latter being in the entry but not in the flesh which reminded us of those days. Young Champion, with white enough about him to make one think the washing was hanging out to dry when Stokes' Champion was paying his dam particular attention, and whose quarters drooped so when he was first shown, as if the breeching had been dropped on him when a foal, has grown out of that into a nice horse, and one whose action has gained many a prize for Mr. Statter, though he now belongs to the Stand Stud Company. But what a rage there is for horse companies; and we trust the shareholders of some may not turn out a whole company of martyrs. Having disposed of the companies' and prize horses, we will run through the glorious array of muscle, bone, and power, beginning with Sir E. C. Dering's. The White Horse of Kent, which is a grey Frenchman, and as handsome as a peacock, but looking at him as a Show horse, not likely to improve the samples exhibited at Liverpool, is we think as much out of his element as the White Horse of Kingston Lisle, Severnake, and the Vale would be. Still, he might improve the horses in Kent, but we like Amazon, a mare of the same breed better than the horse, as she is one of the best of the sort we have seen, many of them having an inclination to droop in the quarters. Carleton Tom, a second-prize two-year-old at Birmingham, was an absentee, Mr. Crowther, his owner, depending on the useful Compact Tom to fight for him, and another of fair form, Cock Robin, both by the celebrated Honest Tom. Mr. Denison's Brown Prince, Paragon, from the Bishop Stortford Agricultural Horse Company, and Lord Ellesmere's Pride of the Shires, are powerful, deep, well-made horses, and for Simon Pare, from the Fyde Horse Breeding Improvement Company, we have said a good word before. The latter Company was the first started, in fact, the old original whose trade-mark at one time was nothing but Honest Tom. The Stand Stud

Company had four others in exclusive of Champion, the good-looking Uncle Tom, the light-middled Honest John, and the fine-grown Heart of Oak, with weak second thighs, and hocks and knees too far from the ground for the pull-away, haul-away business, though all three are by Honest Tom; while another was the neatly-made Ploughboy, by Young Farmer. Mr. Hughes's Young Tom Sayers was a very taking little horse, while Mr. Morgan's Duke of Cambridge and two or three more were in too good company. But one of the nicest for size, form, action, and quality was Mr. Masters's roan England's Wonder, by Tyson's England's Wonder. Five-and-twenty two-year-old Shire colts made a fair class, and were headed by Samson the Second, who is by the winner in the previous class, and has a nice head and neck, good forehead, capital back and loin, grand-quarters, big hocks and knees, and great bone, though in colour and white markings reminds us more of Young Champion than his sire Young Samson. The next best man proved to be British Wonder, by Marsters England's Wonder, of which we gave a description when first at Bath, and who comes into the ring with a jaunty air, more like some one who has changed his name for a thumping legacy than a returned convict, or infamous quack with his floccings, creeping into society in a *nom de guerre*, for he was Thumper at Bath, and now lands at the good port of Liverpool as British Wonder. Wonders will never cease, but increase. The owner of England's Wonder was third with Topsman, a nice, thick-set colt, with hocks not quite in a line where curbs arise, though a good mover, and second at Bath to Mr. Street's horse with the alias. Duke of Cambridge, from Worsley Hall, is a nice stamp of a black cart-horse, of which we said more at Bath, and Roving Boy, also from the same quarters, is very well built and active. Mr. J. Hampson's Merry Boy, Mr. Hudson's The Don, Lord Ashburton's Captain, and Mr. Rowell's Young Drayman were some of the best, while others were useful, and some that reminded one more of a banging job of journey-work than the perfection of nature—a perfect horse. The Shire yearling stallions, eleven in number, were, excepting a few, but a middling class. The first, Wonder, by Wiseman's Wonder out of Lioness, is a deep, thick-set, powerful colt, the Worsley Hall nag, Cambridge Tom, being not so powerful, while Admiral, from the same stable, was very showy, the third of Mr. Drew's being common-looking, with good limbs. For the three classes of Shire stallions the entry was sixty-three, but there were a few more absentees than we have named. The Shire agricultural mares, though only eight, to fifteen at Birmingham, were a very good class, and we think deserved being commended. Lord Ellesmere won with a very nice mare—Honest Lady by Honest Tom, and a foal by Young Samson, taking third honours with Honest Princess by Honest Tom, and a foal by his lordship's prize nag Young Waggoner; while Yorkshire Princess, a well-known powerful prize mare, and a third at Birmingham, is placed second with a fine-grown foal at foot by Honest Tom. There was more honesty in the class, but surely we have given enough to last any one a lifetime. The three-year-old Shire fillies were nicely represented, Lady Worsley being a fine-grown one, with a big hock as if from a kick, and nothing else to find fault with but a little slowness in her loins. Beatrice and Florence, from Merryton, were fairly made; neither did Mr. Pitt's Honesty or Mr. Blundell's Mettle lack form, while Mr. Porter's Biddy had her share, combined with activity. We could not see why the poor-looking Lavinia, in the two-year-old filly class, was put before the grey-Marabland Princess, or Fatima, from Poulton-le-Pyke, with her good form. Mr. Blundell's Lofty, and the Stud Company's fillies, Bonny and Dapper, were not

wanting in good looks. In the three classes of Clydesdale stallions there were sixty-three entries, which is a good muster from over the Border, and to watch them step, a treat, for they move with all the airy elegance of Carlotta Grim, and as if they had the spirit of Cerito in their feet. Topsman, quite a Hercules on a short leg, was second to Young Sampson at Bath, beating a nice-looking one here in Paisley, and the well-built Glenliffet, together with Lord Arthur Cecil's Jock o' Hazeldene, and Young Lofty, once the pride of all the Scots, now in his seventeenth year, and decorated with a necklace of prizes. We almost omitted to mention Prince Albert, from Lockinge Park, with the old-fashioned dead-pulling shoulder, a horse that always appears to be pulling even if standing in his box. Such horses remind one of the slave with the watering-pot. Salisbury, a dark bay, with a fair amount of white, by Young Conqueror, a handsome, lengthy, well-built colt, with capital limbs, and full of quality and Clydesdale character, but rather short in his neck, was picked as the champion of fifteen two-year-old colts; though the second, a black, by Defiance out of Bell, by Sir William, was very good-looking, of capital form, with a deep rib, and moved better, but he was a trifle lighter in bone. Lord Polworth's Marden, a colt of fair form, was placed before Mr. Crewther's Commotion, and Mr. Tweedie's Souter Johnnie, both nice made ones. There was no second prize awarded in the yearling Clydesdale stallions. The three Clydesdale mares and foals were somewhat equal in merit, being all three very good, and Princess more to our fancy than Kelso Maggie or Lady Muir. In the next class we were rather inclined to agree with an old friend—quite a youth, though some years our senior; for the question is not how old are you? but how old do you feel? with both man and horse—who said that he thought if the judges had put the third first, and the first third, they would have been nearer the mark, as Darling is a loose-made filly, light in her thighs, and leggy, and Kate, though neat and active, rather small when alongside the Roses of England—a prize mare at Birmingham, Portsmouth, and other places. Messrs. Stanford's very taking black filly, and a first at Chelmsford, was in this class, the other being Mr. Bruce's The Lady of the Lea, with not the best of forelegs. Of the five useful three-year-old Clydesdale fillies we thought Mettle and Violet 2nd the best. The Suffolks were considered to be well represented, excepting the two-year olds; if so there is plenty of room for improvement, as many of the stallions especially were faulty in their shoulders, with the stiffest of fore legs tied in under the knee, which must be corrected before they will become fashionable with the public. It is no use sticking to antiquated notions and faulty pure breeds while we can improve them with a cross, as the true-born Englishman with his numerous crossings has managed to hold his own against all the pure breeds on the face of the earth, if there are any, and it is time the Suffolk horses were crossed with something to alter defects palpable to the most untutored eye. Cupbearer the third is a powerful horse with some grand points, but does not move as well, nor is he anything like as true made throughout as the smaller horse Royalty, or so hardy looking. In fact we think Mr. Wolton has the best eye for what a Suffolk should be, and that any one would covet his grand mare Newbourn Pride, and the neat short-legged Diamond. As a lot they did not seem to move as well as they did some years ago; though this might only appear so through the breeders of other animals going for action and the Suffolk breeders standing their ground. As most of the Suffolks were noticed in reports of the Sudbury and Essex Shows, we think it unnecessary to say any more about them.

The agricultural mares, with restrictions as to height, for which prizes were given by the local committee, come next. The mares under sixteen hands were a good lot, the winner, *Flores*, being a mare of nice form; while *Mettle*, with her coffin head, straightish back, and sleepy movements, got more than she deserved, with such mares behind her as *Mr. G. Statter's Blossom*, *Messers. Stanford's 6 years' old brown*, *Mr. Tennant's Rose*, and *Lord Ellesmere's Bonny and Diamond*. The pairs of mares or geldings, not less than sixteen hands high, were very good, the first prize going to a grand, powerful brown, and the second to a nicely-matched pair that moved well, a good strong couple coming in for third honours with two of *Mr. Humphries' well up*. The best pair of mares or geldings under sixteen hands high were a capital pair of *Mr. Wilson's*, and the second a light active couple from the *Stand Stood Company*, the third being useful. Come next—the four-year-old prize mare or gelding, not less than sixteen hands—was straight in her back, and had not a powerful loin. The others in the class were very fair ones, under which denomination the two-year-old geldings will come. The mares or geldings not less than five years old were a grand class of sixteen, including such well-known animals as *Mr. Crowther's strapping mare Yorkshire Princess*; *Mr. Beart's fine mare Lioness*, who, with all her flesh, looks a trifle overtopped for her bone; *Messrs. Stanford's sweet mare, The Flower*, whose deeds with her portrait are given in *The Farmer's Magazine* of this month; and *Lord Ellesmere's Honest Lass*, over which, when *Mr. Furner's*, there was so much to do at one of the Suffolk meetings, the Suffolkites stood out for their cattle like a snob would for leather, some of them saying that none but the chestnuts were fit for agricultural purposes. We trust they may be forgiven. Then there were *Mr. Meadows' nice made horses*, *Champion and Conqueror*, *Lord Ellesmere's Dainty*, and *Sir E. C. Desing's nice mare of her sort, Amazon*, which we noticed with the stallions, and last, though not least that magnificent old mare, *Sensation*, a show of herself, and that people, when they see her go, exclaim, "Good Lord! what a mare." If the Suffolks had legs and form like hers we would sing their praises all the day long. Some of the judges in the *Champion Stallion Cup*, which went to *Young Sampson*, stood out for the *Glydesdales*, *Topman* and *Lord Salisbury*, one declaring that he would rather take the young one home than either of the others. But the *Glydesdale* men were over-matched, till the Tuesday morning, when the mares went for their Cup, and the two *Shire* men who were for *Lioness* found three in favour of a compact, nicely made chestnut mare, six years old, breeder unknown, of *Mr. Drew's* which was only second in the class of pairs not less than sixteen hands, through having a partner, a grey, not her equal. Still we think that five other judges might have gone for some of the tight-made, thick-set, handsome mares, of which there were many. There is a party spirit with *Glydesdale* and "*Shire*" men that runs as high as ever did that which has been carried on for so many years between the partisans of *Booth* and *Bates*. Thus endeth a very long chapter on cart horses, though it would have been longer had we space to give the names of all the good-looking ones.

We now take the thorough-breds, which for some years past have been unmercifully overtasked in their infancy, so that many a promising youngster may be seen before he is three years old, cowed in spirit, broken in constitution, and tottering of limb, doomed to drag on a miserable existence as a drudge; or, perhaps, allowed to stock the country with hereditary disease, weak constitutions, and chicken-hearted weeds. We believe there are better thorough bred horses now than when *Eclipse* flourished, and that there are many

hundreds worse, which have become so simply through satisfying the cry for fresh dice. But breeding race-horses is a lottery, always was, and always will be, for that which the breeder once refused has often become the Sultan or Sultana of the Harlem, while grand looking horses prove little at the stud and little ones great. Own brothers and sisters as-unlike as can be, and many noted performers, scarcely leave a descendant worth naming, while others now and then get a "chance horse" which puts breeders on the wrong tack. Nevertheless, let us give our breeders credit for as much foresight as *Mopsus* of old, a great judge of pigs, who foretold how many young ones, and their colour, a sow about to farrow would bring forth. We fancy we hear an old friend and judge of pigs exclaim "Dang it, Master *Mopsus* whoops us!" One hundred and thirty-five pounds brought together seventeen thoroughbred stallions, while at Birmingham eighty pounds enticed nine into the ring. *Citadel*, the great son of *Stockwell* and *Sortie*, fills the same place in the prize lists he did at Birmingham, and like the fat Oxonian is almost too big for anything, with his back gradually hollowing, for he is now in his eighteenth year, and we cannot say what year of his reign, but we think he was four or five years old when we saw him beat a grand lot of thoroughbred stallions at *Salington*. The merry-going *Ganner*, with good ends and wing limbs, but light in the middle, we described at Bath, and *Laughing Stock's* portrait we have taken in pen-and-ink year after year, and show after show, since he was placed first at the Royal meeting held on the race-course at *Newcastle*. We do not like thee *Laughing Stock*, and the reason why is an oft-told tale in *The Mark Lane Express*. *Bête Noir*, *Highlander*, and *Claudius* we described last in our report of the *Alexandra Park Horse Show*, as we did *Lydon*, who was entered here but not on the ground. There was something very useful-looking about the long, low, biglimbed *Wandering Minstrel*, 16 years old, by *Eandango* out of *Gadabout*, and so there was about a brown 8 years old by *Kattleddrum*, out of *Rosalita* by *Felion*. *Restless* is a level-topped horse, on the most stilly-looking legs, and *Advance*, by *Surat* out of *Christina*, by *Maroon*, if he advances with the times, will give up all idea of getting hunters and fix his thoughts upon the road. *Star of Ashton* by *Lozenge*, out of *Seville* by *Augur*, *Lozenge*, with his hollow back, and the cripple *Augur*, have got hunters, but they were not like the sweet, pretty, peacock which claims them for his ancestors. Whether the *King of the Forest* or *Citadel* got a chestnut three years old that was exhibited, is a matter of perfect indifference. Poor *Picton* by *Faughaballagh*, out of *Victorine* by *Speculation*, in his twenty-first year, is a sheer hulk, and looks like carrying fifteen stone to hounds, that is his own carcass to the kennels, or joining in sleep the gallant hero and *Welshman* of the same name. Young *Voltigeur* by *Buckingham* should be shown to the gelder without delay. So much for the thoroughbreds. *Star of the East* is a hackney stallion of nice form and action; *Sir George Wombwell*, a very showy goer; and *Little Wonder*, of fair form; while *Norfolk Hero*, for size, quality, and action, pleased us as much as any in a class of nine. *Sir George*, the perfection of a cob, scored his seventh best Royal as a pony stallion, not less than thirteen two, and not over fourteen two hands. *Prince Charming* was a nice one, and so was the roan, *Gold Star*, whose blood has been in possession of the *Barlows* for seven generations. *Mr. Wilson* was again to the front with *George the Second*, a cobby pony, in a very middling class. The eight hunting mares and foals were poor, as there were but two or three with anything like hunting form—the rising wither, the deep, well-laid shoulder, with plenty before the saddle, the broad hips and strongly quarter, the

well-set muscular limb, with good-sized knees, and hocks near the ground—in fact, that squareness of build throughout that gives grandeur, and distinguishes the hunter from the mere neatness of the hack, or pretentious of my lady's palfrey. For even Lady Lyne, by Codrington, out of Tipsey, by Yaxley, though a nice mare, reminds one more of a gallant hunter, barking at his troop, than the sound of the hounds in full cry. Of hunting mares or geldings up to fifteen stone, five years old or upwards, there were but six, but amongst them was the winner of the first prize in this class last year, Mr. T. Pain's "best horse in the world," and our "model weight carrier," Winder; also, the second best *twelve* and *fourteen* stone hunter at Alexandra Park, and the second prize *fifteen* stone hunter here; and who dare say that Baldersby, next year, shall not be, as well, the second prize heavy and light-weight hack the second best horse in single and double harness, ladies palfrey, cob, and pony? Lady Godiva was a hunting-like mare, with fair action, and so was Mr. Snowball's Hercules, while Mr. Johnson's Ashplant reminded one of a phaeton and pair. There were only five hunting mares or geldings, five years old and upwards, up to 12 stone. And here Glengyle, which only played second to Vandyke at Birmingham, a horse that the Knowsley nag can gallop away from with any weight, was put in his right place, as he was at Skipton-in-Craven last year, when he galloped away from everything. Still he was the first turned out of the ring at Islington, which shows that good horses only want a roomy ring like that at Liverpool, but it was hard going and slippery. Sall is a mare that shows breed, and can go, as could Mr. Warren's Polly. There were eight in the class, but two or three of them absentees. Sir George, the first prize four-year old hunter at Manchester, Islington, and Alexandra Park, we have described as quite a hunter to look at, and was again to the fore here in a middling class of nine, the second being a neat light brown mare, Rosalind, not unknown in the Royal ring; for last year she played second to the hunting-like Bellona at Birmingham, and again met her at Skipton-in-Craven, we think. Boynton, in a fair class of two-year-olds at Birmingham last year, was first, and here, as a three-year-old, in a very decent one of fourteen. He is a fine, well-made horse, and only wants to drop a little to his leg. The second to him was Kate, the first two-year-old filly at Birmingham, a mare of good form by Laughing Stock, and with action more adapted for Rotten Row than hunting, but no doubt she was second best as far as appearance go. Carbine by Carbineer was neat and blood-like, and Mr. Lovatt's Beauty, Mr. Jackson's Rural Dean, Mr. Warren's chestnut gelding, and Mr. Wakefield's chestnut mare worthy of notice. There was a good class of nine hackney mares and foals; and out of seven, four or five nice pony mares and foals not exceeding fourteen hands two inches, which used to be a Galloway in the days of inches, measuring and wrangling on the turf. The well-known Silvertail was first in a class of nine twelve-stone hacks, with about four good ones among them; while the mares and geldings exceeding fifteen hands and up to not less than fifteen stone, three in number, were headed by Surprise, a mare of fair form and a stepper. Then, that well-known flourishing goer, Charles the Second, from Hull, is always Charles the First, as he was in the hacks not exceeding fifteen hands and up to twelve stone, of which there was not a grand lot. King of the Fairies, a neat, clever stepper, beat a vulgar one in the hacks up to fifteen stone. The Duke of Hamilton's Booco added another victory to his long score in an ordinary class, which, with a few decent ponies not exceeding thirteen hands make up the total. The judges thought the Society might give a little more prize money for hunters, and so

do we, as owners, when winners, after paying railway-fare, and being fleeced by innkeepers, land with a very little money at the old house at home.

THE CATTLE.

It is proverbially easy to follow a multitude, and for that reason, perhaps, the ring in which the Shorthorns were being judged was crowded, whilst the others had scarcely an on-looker. It may be rank heresy to attribute this circumstance to any other cause than that Shorthorns are more deserving attention than other breeds of stock, but we may put down something at least to the force of example. At all events, we found ourselves irresistibly drawn to the excited crowd at the ring, which was fenced in with posts and rails, as being the correct and fashionable thing to do, though occasionally directing a furtive glance towards the simply roped enclosures where meaner kinds of stock—such as Herefords and Devons—were receiving the rewards of such merit as they might be thought to possess.

As the Shorthorn fashion itself is an acquired taste, it is not to be wondered at that the literature of the subject should have a nomenclature peculiarly its own. One can quite understand that ordinary adjectives are not applicable to animals which costs thousands of pounds—some must of necessity be invented for the purpose. Then, again, it must be very natural to apply such terms as "grand," "magnificent," "splendid," "unique," &c., to a specimen of bovine aristocracy with the fabulous pedigree of a long line of Dukes and Duchesses—although to the uninitiated it might appear to be a rough, coarse, unkindly animal, such as contractors are wont to purchase. But we must not offend ears polite.

The opening scene commenced a little after 9 a.m., when sixteen or seventeen bulls, above three years old, were led into the ring. Most of them are known, by name, at least, to every one who reads an agricultural newspaper. The animals themselves seem to know what is going on; they walk quietly round the ring, probably recognising old acquaintances and rivals, and possibly some of the spectators and officials. Nothing will tempt them to bad behaviour—not even two hours' indecision—although a fervid imagination might detect certain anxious glances towards the rosette-box. But to our story. Some of these old bulls are what an outsider would consider plain. One ignorant or prejudiced individual actually called one of them a brute, and the look of contemptuous scorn and pity with which the remark was received must have withered his soul. The judges took a long time and a vast amount of trouble with these animals, and the patience of on-lookers began to be well nigh exhausted before a decided movement was made toward the end of the enclosure by Mr. Davies' Oxford's King, Mr. Hopkins's Duke of St. John's, Mr. Wodehouse's Royal Havering 2nd, and, after a time, Mr. Thompson's Baron Berrington 3rd. This last is of nice quality, but is, perhaps, of rather too feminine a character. Another long consideration as to whether there were any more who were not good enough to remain ended by the judges thinking them at least too good to send away. Then came the tug of war. The cracks were sent to the front, the first and second being a foregone conclusion, although how these two were to be arranged cost them much trouble. At last the decision of last year was reversed, and Mr. Linton's Sir Arthur Ingram was awarded the red rosette, and the Marquis of Exeter's Telemachus 5th the blue. This award will of course be criticised from various points of view. The two animals are of a very different type, and will scarcely admit of comparison. No doubt the award is in accordance with show-form, as different sections of the "fancy" regard the idea conveyed by that term. The partisans of distinct types of Short-

born excellence claim *quality* for their two *protoges*. That being so, the question is evidently open as to what *quality* really is. A bullock-breeder would say without a moment's hesitation, that his idea of quality was exemplified by Telemachus 6th. But what business has a bullock-breeder to pass heathenish opinions about the awards made at the Royal Agricultural Society's show? He will feel, if he is a sensitive man, that in the vicinity of the Shorthorns, at least, he is *de trop*. He will be likely to ask himself, or perchance, incautiously, some one near him, the very awkward question as to which of those two rivals are best adapted to get bulls that may get other bulls which will get the best rent-paying stock! These removes are quite near enough. We believe that what we term "butchers' animals" are not liked by the "fancy;" but they are exactly what farmers want. The rich, mellow hide and abundance of soft hair, the wealth of flesh and massive character, are such as would gain favour for Telemachus 6th from outsiders. But he is perhaps a little overdone, fed up too much, whilst the showy form of Sir Arthur Ingram is all that Shorthorn fanciers can desire. His deep bricket and hanging dewlap, together with a head well set on, give him a masculine and very taking appearance. Yet there are some plain points about him, and his skin, though soft, is very thin. Of course this animal takes the Champion Cup, value £50, for the best Shorthorn male in the show-yard, given by the Right Hon. Lord Selkirk, President of the Society. The third prize goes to Mr. Atkinson for Sergeant Irwin, who was fourth last year at Birmingham. This is a half brother to the winner of the first prize, and, like him, has black tips to his horns, but is a very different handler. He is short on his legs and meets you well. Then comes Mr. Mitchell's Duke of Chambergh, who obtains the fourth award, an animal with long body and good quarters, but very narrow in his girth between the shoulders. The Rambler obtains the reserve and a high commendation. His shoulders are plain and if the slang expression of having "too much daylight underneath," is allowable at all, it may be applied to him. To the uninitiated there would seem to be better beasts than the two last mentioned in the class, such, for instance, as Mr. Bee's Mountain Prince, which gets highly commended. This animal appears to be lame; he has many good qualities, but is not quite round enough, his ribs scarcely springing as they should—still he is beyond doubt a good bull. Mr. Brown's Pioneer, a beast of particularly nice quality, is commended, as is Prince Pack, the property of Mr. Garne, a still better animal, very level, good ribs and quarters, masculine without being coarse; yet he does not handle quite to perfection. Hindoo Chief is also commended, and, though liked by many, he is rather a coarse bull. The Marquis of Ekeater's Telemachus 9th gets nothing more than a commendation, although he is one of the handsomest in his class. He is a little wanting where Shorthorns are usually effective—behind the shoulders—but his touch is good and his coat beautiful; for quality and character he is second only to his half brother, and together they are a noble pair. Royal Irwin and Sober Robin both get commendations, whilst Baron Barrington 3rd is passed over, perhaps on account of his feminine appearance, although his quality is excellent. Although there are some mediocre animals in this class there are some very good ones, and highly creditable to Shorthorn society. The influence of such as these on the stock of the country cannot be overrated, because their blood is strong enough to hand down to their posterity the qualities of their progenitors, even though they may not show all the outward and visible signs of possession themselves; whilst the adapt-

ability of the Shorthorns to soil and climate will secure to them the leading position wherever a system of mixed agriculture is carried out.

The next class for bulls above two and not exceeding three years old was well represented, on the whole, but not of equal merit to the older bulls. Here again there were some really bad ones which soon found their way to the end of the ring. Some half-dozen were in due time sent to the front, and the judges did not take quite so long to consider about it as with the previous class. There was very little doubt as to where the first honour would go, and the Duke of Northumberland's Snowstorm very fairly earned the first prize. His loin is extraordinary, and his character and style all that can be desired. But when the second prize went to "Rear Admiral" there was some little dissatisfaction expressed by on-lookers. Nothing can be neater than this bull, very level, very pretty, and very taking; but he is light, thin-coated, shelly, long-legged, and has no masculine style about him—would have made a handsome steer. This is not at all a likely bull to get farmers' stock; however, he found greater favour at Liverpool than at Bath. Next comes Mr. Moljambe's Lavengro for third place, and although he has his failings in shoulder and ribs, yet he is a noble type of animal, and full of character; head well set on, a bold-neck, not in the least coarse, long straight body and tail like a whip-thong—every inch a gentleman. The fourth prize goes to Mr. Bland's General Fauce, the very Antipodes of the preceding. A big framed animal, with thick coat, good back, ribs, quarters, and chine, but without coarse. Then the reserve and a high commendation is taken by Sir Hugo Irwin whose tail rivets attention, so badly is it set on; beside that he has narrow crops and is light behind his shoulders. The Baron, a rather short bull with good forequarters, and Clovia, who has nothing particular to boast of, are both commended; so also is Count Towneley, who is not very even behind, but has many good points in his favour. Of the bad ones it is unnecessary to speak, and as there is nothing more calling for special remark the class may be dismissed as not being of extraordinary merit.

The yearling bulls come next. It is a very unthankful office to have to express opinions about yearlings—they are so uncertain and disappointing in their results, even when the selected youngsters at a Royal Show are the subject-matter. One of the best of our breeders and foremost judges remarked in our hearing that it was unsafe to condemn a youngster for a bad touch, exemplifying his argument by quoting an instance in which a yearling condemned by him for harshness and unkindness had subsequently carried everything before it and turned out one of the best animals of the day. This case only proves that there are exceptions to every rule—if such proof be needed—but it does not show that this bad form was unaccountable at the time. Now that the showing of animals has grown from a business into a profession, it must be suicidal to exhibit any animal, especially a youngster, when, from any cause, it may be other than in its best trim—that is, *healthy*. It is quite possible that any of the many causes which may, and do, throw an animal out of condition may be misinterpreted by the judges, who have only to deal with matters as they find them; and that being so, the exhibitors, and not the judges, are responsible for any discrepancy which may occur in the awards. Although the class may be considered below par, as it probably is, there are some good animals to be found in it. Mr. Torr's Fitz William is, perhaps, one of the most promising Shorthorns in the yard, but his age is unfair to the others. Putting that on one side, there he is, a good bull—he may improve in his handling, and not grow patchy-rumped, which now appears likely. Calamazoo

takes the second prize, and is certainly a credit to Sir Arthur Ingram. This is apparently cut out for a show bull. His character is finely masculine, tail slightly high, but a good handler, deep, stylish forequarters, and of a fine, masculine character. Mr. Foljambe's Flag of France is third on the list, and Mr. Relph's Bright Duke brings up the rear. Instead of fourth, he may one day take first honours, for he is a stylish and promising animal, with a mellow touch. Mr. Bland's General Flirt is reserved and commended, and Mr. Handley's Alfred the Great, a very promising animal, of excellent quality and style, is also commended, with more apparent justice.

Of the bull calves it is not at all necessary to speak in detail. Calves, like babies, alter in a manner which is not anticipated, and certainly not desired. They are supposed to grow up contrary to their first promise; and the number of "ornary" people is about equivalent to that of angelic infants which are idolized by women and carefully avoided by men. The class may with propriety be termed common-place. About half are absentees. Mr. Willis' Vice Admiral is a promising fellow, straight and stylish, with good ribs, and a nice colour—may grow into a good bull. The Earl of Feversham takes second honours with Baron Ryedall, a thick-coated, mellow-handling calf. The Mytton Farming Company are third with Mytton Chief, a calf of very level and nice quality, that may be heard of and seen again in good company another day. The fourth prize goes to Mr. Stratton's Carbuncle—an ominous name for a bull now-a-days. Perhaps the owner has a "Scrofula" or a "Tuberculosis" in the back-ground! There is not much to say for this youngster beyond a nice touch. Lieut.-Colonel Loyd Lindsay's Belgrade takes the reserve, but the judges do not think it wise to commend him. He looks like making a coarse animal. Nothing else in the class worth mentioning, although some two or three might be very fairly condemned.

The cows came next, and were a very superior lot of show animals, most of them in good "show" form, and otherwise satisfactory to the eye of those who keep animals on purpose to win prizes. A "milking" man would say they were patchy old cows, without a good-bagged one amongst them; and a grazier would simply declare they had missed their season for marketing—but in the Shorthorn world they gave the impression of "grandeur," "magnificence," and "splendour" in an overpowering degree. When cows get on in years, and have been highly-fed all their lives, there comes a time when they cease to be sightly, and all one can do is to make a mark against an animal which may have gone fairly through the process, and had strength of constitution sufficient to come well out of it. All the cows shown here have been described over and over again, and as they do not get better it is quite as well to let them rest on their laurels. Mr. Benjamin St. John Ackers is first with Queen of the Georgians, and takes the £80 cup given by the Earl of Bective for the best Shorthorn female in the yard. She is a good cow—as she must have been to take the lead in such a class—and one might almost say she is good all over. Lady Alicia is second, Telemacina third, Zvezda fourth, Moonshine reserve and highly commended, Royal Rose highly commended, Laurestina 2nd highly commended, and Alma commended. This will give an idea of the judges' opinion of the class, whilst outside the ring they were greatly admired.

The heifers came next—a small class, which would have been weak else. Lady Pigot's Imperious Queen takes the first prize, a very stylish animal with indifferent horns; Grateful second; Gaiety 3rd is third; Roalba is fourth (with better quality than any of them); and Mr. W. Handley's Lily Windsor is the reserve, with a high commendation, which some

would think scarcely meritorious. The Stand Stud Co. show an attractive heifer, which has not character enough for a prize winner—at least at Liverpool. There should be some better heifers than these about somewhere, and no doubt there are; for a breeder who keeps a working herd can scarcely afford to spoil one of his best in preparation for a show. The yearling heifers are not much beyond a large class with some eight or ten decent animals in it. The winner is "as near as no matter" a two-year-old, and the prize list may be referred to for the rest. It will be quite as well to do so in respect to the heifer calves. The class for cows with not less than two of their offspring is of course a trying one which borders too much on practical utility to please the "fancy." It is too often a very inconvenient thing to show three generations, especially as the knowing ones have been said to hint darkly that not more than one calf in—is fit for show purposes. Such a class as this, therefore, is not very agreeable to the feelings of those who compete at our best shows. All credit, then, is due to the Ringlet family, which comes out fairly well, and honestly wins. If one last word is allowable on the subject of Shorthorn breeding in connection with this show at Liverpool, it is that the country will gain when fashion in breeding runs—for ever so short a time—in the direction of practical utility.

We come now to a class of animals who, being unable to blow their own trumpets, and professional performers having, as a rule, other proclivities, are obliged to stand on their merits. Fortunately these are a sufficiently firm basis on which to rest. No one makes any fuss about Hereford beasts, because those who know them best can not only appreciate their peculiar worth, but at the same time are able to value them in their place without committing the grave error of taking them out of it. As grass beasts they are unrivalled, and far more likely to do well in Australia and America where there is grass and suitable climate, than the Shorthorn or any other of our breeds. But in England the Hereford is not suitable for other than grazing districts, and not by any means likely to shine under the same circumstances and treatment as the cosmopolitan Shorthorn. It is therefore unlikely that the Herefords will ever command more than local interest and attention; at the same time when in season at the end of summer it will be conceded that there is no other breed as good for the butcher's purpose. In Liverpool the classes in which these attractive animals are arranged are so meagrely filled that a few professional prize-takers simply walk over the course. Mr. Taylor's Tredegar, first, and Mr. Thomas's Horace, second, in a class of two entries, are *nul-tum in parvo* certainly, but there comes of it nothing of interest to the Society, except that it is worth while coming to Liverpool—if not from too great a distance—to see such an animal as Tredegar, if not hitherto known, which is most unlikely if the visitor has been in the habit of visiting the larger agricultural shows. In the younger class for bulls above two, and not exceeding three years old, Mr. W. Taylor is first, Mrs. Sarah Edwards second, with an animal which scarcely handles as he should from his parentage, and Mr. Lister third, with a reserve for another animal. Mr. Duckham cannot get an honourable mention this time, nor does he altogether deserve one with Concord; and Mr. Hewer's Hero is not quite good enough. For yearling bulls Mrs. Sarah Edwards, Mr. W. Taylor, and Mr. Carwardine are in rotation, and Mr. Taylor takes a reserve with a son of Tredegar. For cows above three years old Mr. Tudge is first and third, Mr. Carwardine second, and the other four all highly commended. One does not like to draw comparisons, nor make invidious distinctions, but judging these Hereford cows on the same principle as in the criticisms which have been made on the Shorthorns, the Hereford cows are

better than their fashionable sisters. This is the *forte* of the Hereford men, whilst the Shorthorn breeders would (some of them) want a Latin poem composed on anything very extraordinary in the shape of an old cow. We mean no offence. The rest of the classes are barely represented, and the friends, whose names we have already mentioned, merely exchange compliments with each other. The Devons are a very small lot with some three or four breeders as exhibitors. Viscount Palmouth leads off with The Only Jones, and then his Lordship, Mr. Walter Farthing, and Mrs. Langton quietly swallow up everything, her Majesty the Queen being left out in the cold, as has now become the usual thing in a show-yard. The north-country people are no doubt gratified by the sight of such animals as The Only Jones and Sirlolin, but so far as the Herefords and Devons are concerned, the prizes are simply thrown away, because there is virtually no competition—still more so in respect of Sussex and polled Norfolk breeds, the number of entries being scarcely greater than that of the prizes. No useful purpose can be served by this. On the other hand, there is an excellent show of Welsh black cattle, and the competition will be of service to the district in which they are bred, more especially as these cattle seldom make a show at the large meetings far away from their locality. The Ayrshires and polled Galloways have also an opportunity of putting in an appearance, and some 16 Longhorns vie with each other in ugliness for a reward. These animals have merits if one only knew where to find them, and they are most likely to be apparent when the animals are in the ring; close inspection will never do—but they are long, wiry, and good milkers. Sometimes there are strong signs of this blood in some of our Shorthorns—say, fashionable ones too. Let us not despise the well from which much of our material was hewn, and—let us not talk any more than we can help about the raw material.

Another very useful section of the show is the dairy cows, animals in daily use and profit contend for superiority, and Mr. Stratton, the Stand Stud Company, Mr. Stewart, and Mr. Crowther are the successful exhibitors. The Jerseys are well represented, and the cow class is, for merit, perhaps the best in the Show, the weakest entry being quite worthy of the high commendation it received from the judges' hands. This is something very enjoyable, even to those who take no interest in this breed of animals. If the Shorthorn cows were as good of their kind as the Jerseys are in respect to the breed they represent, an idyll might be composed, or at the very least a song, or possibly some Latin verses, would scarcely be out of place. The cattle, as a whole, are not any better than they should be at a Royal Show, and there are some breeders who will never learn when to send an animal to a show and when to keep it at home.

THE SHEEP.

The classes begin with the Leicesters, and the first sheep handled makes one so filthy that it is positively necessary to go to the next class—the Border Leicesters—to find a clean-woolled non-prizetaker to cleanse one's hands upon. After this it is hard work to come back to them. Twenty-seven entries of shearling rams offer nothing much to remark upon. The quality about as usual, and the same exhibitors' names are to be found in the catalogue—Mr. Hutchinson first, Mr. Turner second, Mr. Borton third, and Mr. Craswell takes the reserve. The whole class was commended by the judges. The Border Leicesters are too high on their legs to make good sheep, but they are very useful in their proper place. The Cotswolds were in particularly good form, and were the best classes of that breed exhibited out of their district for some time. The Lincolns were about as usual, and the Oxford Downs

another good class, particularly in respect to the ewes. Shropshires, of course, were the most numerous, there being sixty-one entries of shearling rams. Mr. Townshend takes the lead in this class, and Lord Chesham is first with the older sheep of which there are twenty entries. Here again the ewes were well represented, Lord Chesham being first with his usual form, Mr. Batch second with a pen of big ewes, Mr. Jowitt third, and Mr. Farmer reserve number for a most useful lot of long good sheep that look like rent-payers. The Hampshires were in small force, and not remarkable. Several visitors were attracted by the black-faced mountain sheep, the Herdwicks, the Louks, and other curiosities, and some of the Southdown men might be seen casting timid glances in that direction. These classes were very interesting.

The Southdowns are a little too far from home for very full classes, but nearly all the noted breeders have exhibited. The shearling rams are not the best ever shown at a Royal meeting, and the class may be called rather a weak one. The first prize is taken by Sir William Throckmorton with a not very stylish sheep. His back is good, but his neck and shoulder is light, and so he is under his thighs; not only that, but he has crooked legs, and altogether he is not the sort of sheep many breeders would fall in love with. Mr. Rigden is second with a sheep of a very different class—small, but headless well all over. This sheep was commended at Bath; he is very level, good twist and dock, tail perhaps a thought too low, excellent neck and shoulders, and a sweet countenance—quite a model. Sir William Throckmorton is third, and the Messrs. Heasman reserve number and highly commended. This last sheep is of great length, and is a very useful sheep for a farmer's purpose, as this breeder's animals always are, but he is scarcely in show form. Mr. Hugh Gorringe is commended for a long, good-backed sheep, but rather too paunchy. Mr. Coleman also takes a commendation. The Prince of Wales's sheep, which was first at Bath, is passed over here, and we think with justice; for the animal is a bad walker, made up with wool, and is slack behind the shoulders. Lord Walsingham's four entries are not in their usual form, and about the weakest lot Merton has turned out for some time. The Duke of Richmond sends three entries, whose character and quality are not such as have ere now come from Goodwood. The class can scarcely be said to be commendable. With the older rams Lord Walsingham is very deservedly first and second, the winner being one of the best animals in the yard, as he was at Bath. Mr. Jones is third, the Duke of Richmond reserve number and highly commended, and commended for another entry. Mr. Rigden also takes a commendation for a rather small sheep. The class for shearling ewes comes out rather better. Sir W. Throckmorton is first here as at Bath, and the Prince of Wales second. This is an admirable pen of ewes—good handlers and possessing size, quality, and character. Lord Walsingham is third, and Mr. Coleman's reserve number and high commendation is a very worthy pen of sheep. The pen from Goodwood are weak in the loin; one ewe amongst them shows that the old style and countenance is not quite gone.

THE PIGS.

The pigs were, as usual, so fat that they might more fairly take honours at the Smithfield Club Christmas Show than as breeding animals. The Berkshires, however, were not in all cases over-done, and there were sows with good litters to be found in some of the classes. The show-form of pigs is not agreeable to the ordinary eye, and must be ruinous to the animals. The classes appeared to be very well filled.

Mare or gelding, three years old.—First prize, £30, Duke of Hamilton (Boynton); second, £10, J. Bickerby (Young Kate); third, £5, T. H. Miller (Carbion). Reserve and highly commended: J. J. Banks, Lunefoot, Kendal, Westmoreland (Rural Dean).

HACKNEYS AND ROADSTERS.

Mare or gelding, exceeding fifteen hands, and up to not less than twelve stone.—First prize, £15, Stand Stud Company, Whitefield, Manchester (Silverfain); second, £10, J. C. Toppin, Skelton, Cumberland (Major); third, £5, W. W. Townson, Hotham-street, Liverpool. Reserve and highly commended: J. Turvey, Southport, Lancashire (Peggy).

Mare or gelding, exceeding fifteen hands, and up to not less than fifteen stone.—First prize, £15, Stand Stud Company (Surprise); second, £10, D. Carlyle, The Crescent, Carlisle, Cumberland (The Colonel).

Mare or gelding, above fourteen and not exceeding fifteen hands, and up to twelve stone.—First prize, £15, J. B. Binson, Hebble-road, Hull (Charles the Second); second, £10, A. C. Woodhead, Bowdon, Cheshire (Kathleen); third, £5, J. C. Rogerson, Manchester (Lady Sybilla). Reserve: R. Wright, Whalley Range, Manchester (Priscilla).

Weight-carrying hacks or roadsters, above fourteen and not exceeding fifteen hands, up to fifteen stone.—First prize, £15, Stand Stud Company (King of the Fairies).

Pony mare or gelding, above thirteen hands and not exceeding fourteen hands.—First prize, £15, Duke of Hamilton (Bosco); second, £10, E. Mather, West Derby, Liverpool (Charlie); third, £5, J. O. Toppin, Skelton, Cumberland (Fairy Queen). Reserve and highly commended: M. E. Mather, Leamington, Warwick (Daphne).

Pony mare or gelding, not exceeding thirteen hands.—First prize, £15, R. V. Mather, Southport, Lancashire (Rex); second, £10, J. Carr, Leyland, Lancashire (Welsh Gul); third, £5, E. A. Richards, Preston, Lancashire (Gipsy). Reserve and highly commended: A. Ashton, Middleton, Lancashire (Tommy).

CATTLE.

SHORTHORNS.

Bull, above three years old.—First prize, £30, W. Linton, Sheriff Hutton, York (Sir Arthur Ingram); second, £20, Marquis of Exeter, Burghley Park, Stamford (Telemechus 6th); third, £15, T. Atkinson, Unsworth, Manchester (Sergeant Irwin); fourth, £10, W. A. Mitchell, Whitehouse, Aberdeenshire (Duke of Chaburgh). Highly commended and reserved: J. and G. Galtzell, Holmbrook, Cumberland (Rambler). Highly commended: B. B. Preston, Lancashire (Mountain Prince). Commended: A. H. Browne, Chathill, Northumberland (Pioneer); G. Garne, Chipping Norton, Oxfordshire (Prince Puck); J. Relf Shap, Westmoreland (Sober Robin); W. C. T. Mynors, Tixall, Stafford (Hindoo Chief); Marquis of Exeter (Telemechus 9th); W. Handley, Milnthorpe, Westmoreland (Royal Irwin).

Bull, above two and not exceeding three years old.—First prize, £25, Duke of Northumberland, Alnwick Castle, Northumberland (Snowstorm); second, £15, T. Willis, Carperby, Bedale, Yorkshire (Rear Admiral); third, £10, F. J. S. Foljambe, M.P., Worksop, Notts (Lavango); fourth, £5, T. H. Bland, of Dingley Grange, Market Harborough, Leicestershire (General Fauce). Reserve and highly commended: W. Linton, Sheriff Hutton, York (Sir Hugo Irwin). Commended: B. St. J. Ackers, Prinknash Park, Painswick (Clovis); J. Rowley, jun., Stubbs Walden, Pontefract, Yorkshire (Count Towneley); Sir D. Baird, Bart., Newbyth, Prestonskirk, Haddingtonshire (The Baron).

Yearling bull, above one and not exceeding two years old.—First prize, £25, J. Torr, M.P., Ayleby Manor, Grimsby, Lincolnshire (Fitz William); second, £15, W. Tennant, Barlow, Selby, Yorkshire (Kalamazoo); third, £10, F. J. S. Foljambe M.P. (Flag of France); fourth, £5, J. Relf (Bright Duke). Reserve and highly commended: T. H. Bland (General Flirt). Commended: W. Handley (Alfred the Great).

Bull calf, above six and not exceeding twelve months old.—First prize, £20, T. Willis (Vice-Admiral); second, £15, Earl of Feversham, Duncombe Park, Helmsley, Yorkshire (Baron Rydale); third, £10, Mytton Farming Company, Whalley, Blackburn, Lancashire (Mytton Chief); fourth, £5, R. Stratton, Duffryn, Newport, Mon. (Carbuacle). Re-

serve: Lieut.-Colonel Lloyd Lindsay, V.O., M.P., Lockings Park, Wantage, Berks (Belgrade).

Cow, above three years old.—First prize, £30, B. St. John Ackers, Painswick, Gloucestershire (Queen of the Georgians); second, £15, T. H. Hutchinson, Catterick, Yorkshire (Lady Alicia); third, £10, Marquis of Exeter (Telemechus); fourth, £5, Emily, Lady Pigot, Weybridge, Surrey (Zoraida). Reserve and highly commended: T. Atkinson (Moonshine). Highly commended: R. Bruce, Great Smeaton, Northallerton, Yorkshire (Royal Rose); W. Graham, Highbury, London (Laurentian 2nd). Commended: W. A. Mitchell, Whitehouse (Alma).

Heifer in-milk or in-calf not exceeding three years old.—First prize, £20, Emily, Lady Pigot (Imperious Queen); second, £15, T. H. Hutchinson (Gratistal); third, £10, J. Angus, Stockfield-on-Tyne, Northumberland (Gaiety 2nd); fourth, £5, Emily, Lady Pigot (Bonnie). Reserve and highly commended: W. Handley (Lily Windsor).

Yearling heifer, above one and not exceeding two years old.—First prize, £20, R. Marsh, Little Offley, Hitchin, Hertfordshire (Diana); second, £15, Earl of Kilmarnock, Worley Hall, Manchester (The Lady); third, £10, T. H. Bland, Dingley Grange, Market Harborough (Brazilian Bride); fourth, £5, B. St. John Ackers, Prinknash Park, Painswick (Second Lady Carew). Reserve and highly commended: Lady Pigot, West Hall, Weybridge, Surrey (Victoria Lucia).

Heifer calf, above six and under twelve months old.—First prize, £20, A. Brassy, Haythorpe Park, Chipping Norton, Oxfordshire (Jemima 4th); second, £15, Lord Selsley, Tootington, Wincomb, Gloucestershire (Seraphina Bella 4th); third, £10, B. St. John Ackers (Third Lady Carew); fourth, £5, G. G. ree, Charchill Heath, Chipping Norton, Oxfordshire (Portrait 18th). Reserve: The Duke of Northumberland, Alnwick Castle (Lady Jane). Commended: T. H. Miller, Singleton Park, Poulton-le-Fylde, Lancashire (Fleur de France); J. White, Aldborough Hall, Darlington, Yorkshire (Actress).

Cow, and not less than two of her offspring.—First prize, £50, T. H. Miller (Ringlet 2nd); second, £25, G. Ashburner, Low Hall, Kirkby Ireleth, Carnforth, Lancashire (Duchess of Kirkby); third, £10, W. H. Woodhouse, Woolmers Park, Hertford (Countess). Reserve: H. Lovatt, Low Hill, Baskbury, Wolverhampton (Medea).

HEREFORDS.

Bull, above three years old.—First prize, £25, W. Taylor, Showle Court, Ledbury, Herefordshire (Tredegar); second, £15, T. Thomas, St. Hilary, Cowbridge, Glamorganshire (Horace 2nd).

Bull, above two and not exceeding three years old.—First prize, £25, W. Taylor (Thoughtful); second, £15, Sarah Edwards, Wintercott, Loominster, Herefordshire (Sir Edward); third, £5, E. Lister, Cefn Ila, Usk, Monmouthshire (John Bull). Reserve: E. Lister (May Duke).

Yearling bull, above one and not exceeding two years old.—First prize, £25, Sarah Edwards (Victor); second, £15, W. Taylor (Telescope); third, £5, T. J. Carwardine, Sockton Bury, Loominster, Herefordshire (Ben Battle). Reserve: W. Taylor (Tredegar 2nd).

Bull calf, above six and not exceeding twelve months old.—First prize, £15, T. J. Carwardine (Anxiety); second, £10, T. J. Carwardine (The Sultan); third, £5, W. Tudge, Leishall, Ludlow (Field Marshal). Reserve: T. Thomas (Horace 2nd).

Cow, above three years old.—First prize, £30, W. Tudge, Adforton (Rosebud); second, £10, T. J. Carwardine (Helena); third, £5, W. Tudge (Giantess). Reserve: T. Myddleton, Llynaven, Clun, Shropshire (Nina). Highly commended: T. Thomas (Rosaline); F. Platt, Sugwas Court, Hereford (Morella); T. Nott, Letton Court, Brampton Bryan, Herefordshire (Melody 4th).

Heifer in-milk or in-calf, not exceeding three years old.—First prize, £15, Sarah Edwards (Mabel); second, £10, W. B. Peren, Compton House, South Petherton, Somerset (Queen of the Roses); third, £5, W. Tudge (Beatrice).

Yearling heifer, above one and not exceeding two years old.—First prize, £15, Sarah Edwards (Leonora); second, £10, Sarah Edwards (Beatrice); third, H. B. Hall, Ashton House, Loominster (Lady Alice). Reserve: W. Tudge, Adforton (Bright Eyes).

Heifer calf, above six and under twelve months old.—First

second, £30, H. Wolton, The Hall, Newbourn, Woodbridge, Suffolk (Royalty); third, £10, M. Biddell, Playford, Ipswich, Suffolk (Bon). Reserve: R. Garrett (Viceroy). Highly commended: R. Capon, Dennington Lodge, Wickham Market, Suffolk (Conqueror). Commended: R. Garrett.

Suffolk stallion foaled in the year 1875.—First prize, £50, S. Wolton, Baitly Abbey, Wickham Market, Suffolk; second, £30, W. Toller, Godgrave, Wickham Market, Suffolk (Robin Hood).

Thorough bred stallion suitable for getting hunters.—First prize, £100, T. Gee, Dewhurst Lodge, Wadhurst, Sussex (Stadel); second, £35, F. Barlow, Hasketon, Woodbridge, Suffolk (The Gunner); third, £10, R. H. Hatton, 5, Upper Berkeley-street, Portland-square, London (Laughing Stock). Highly commended: H. W. Freeman, Newbridge Hill Stud Farm, Bath (Claudius).

Stallion suitable for getting hackneys, not less than 14 hands 3 inches, and not exceeding 15 hands 2 inches.—First prize, £35, Stand Stud Company (Star of the East); second, £15, H. Roundell, Black Horse Hotel, Otley, York (Sir George Wombwell); third, £5, Stand Stud Company (Little Wonder). Reserve and highly commended: B. Balderston, Mount Pleasant, Boston, Lincolnshire (Norfolk Hero).

Pony stallion not less than 13 hands 3 inches, and under 14 hands 2 inches.—First prize, £35, C. W. Wilson, High Park, Keadal, Westmoreland (Sir George); second, £15, F. Briow (Gold Star); third, £5, R. Marshall, Keyingham, Hull, Yorkshire (Prince Charming). Reserve and highly commended: H. Baltistaft, Bedwell Hay, Ely, Cambridgeshire (Le Beau).

Pony stallion under 13 hands 3 inches high.—First prize, £15, C. W. Wilson (George 2nd); second, £10, T. E. Blandell, Hill, near Ragby, Stockton, Warwickshire (black Prince); third, £5, J. Ross, Llanboidy, Whitland, R.S.O., Carmarthenshire (Cynarw Bach). Reserve and highly commended: A. Baird (Fireworks).

BLOOD MARES AND AGRICULTURAL FILLIES.

Agricultural mare and foal, not qualified to compete as Clydesdale or Suffolk.—First prize, £30, Earl of Ellesmere (Honest Lady); second, £20, T. H. Miller, Singleton Park, Poulton-le-Fylde, Lancashire (Princess of Wales); third, £10, Earl of Ellesmere (Honest Princess). Reserve and highly commended: Major H. Platt, Gorrindog, Bangor, Carnarvonshire (Jessie). Commended: J. Waterworth, Seala Green, North Ashton, Wigan, Lancashire (Diana).

Clydesdale mare and foal.—First prize, £30, J. Thompson (Kate Maggie); second, £20, L. Drew (Princess); third, £10, Earl of Ellesmere (Mrs. Muir).

Suffolk mare and foal.—First prize, £30, H. Wolton (Newbourn Pride); second, £20, M. Biddell, Playford, Ipswich, Suffolk (Pride); third, £10, H. Wolton (Royal Diamond). Highly commended: Earl Howe, Gypall Hall, Atherstone, Leicestershire (Scot).

Agricultural cart mare, not exceeding 16 hands, with a foal.—First prize, £15, Earl of Ellesmere (Fiera); second, £10, L. Drew (Mettle); third, £5, Earl of Ellesmere (Bounty). Reserve: G. F. Statter, Park House, Whitefield, Lancashire (Blossom).

Agricultural filly, three years old (not qualified to compete as Clydesdale or Suffolk).—First prize, £20, Earl of Ellesmere (Lady Worley); second, £10, J. Jackson, Height o' th' Hill, Staines, Poulton-le-Fylde, Lancaster (Brock); third, £5, L. Drew (Bratree). Reserve: L. Drew (Flourace). Highly commended: P. Biendell, Beam Hill, Wootton, Kirkham, Lancashire (Mettle). Commended: W. P. Miller, Merlewood, Grange-over-Sands, Lancashire (Honesty); A. Baird (Soncie); W. Porter, Wyre Bank, Garstang, Lancaster (Biddy); T. F. Jackson, Tutthall Hall, near Chester (Flower).

Clydesdale filly, three years old.—First prize, £20, J. McQueen, Crofta, Dalbeattie, N.B. (Dwelling); second, £10, Duchess of Hamilton, Easton Park, Wickham Market, Suffolk (Kate); third, £5, W. Drewitt, Bramley, Guildford, Surrey (Rose of England). Reserve: R. Bruce, Manor House, Great Smeaton, Northallerton, York (The Lady of the Lea). Commended: K. and A. Stanford, Eatons, Ashurst, Steyning, Sussex (Maggie).

Suffolk filly, three years old.—Prize, £20, J. Toller, Blaxhall, Wickham Market (Pearl).

Agricultural filly, two years old (not qualified to compete as Clydesdale or Suffolk).—First prize, £20, L. Drew (Lavinia);

second, £10, C. Masters, Saddlebow, King's Lynn, Norfolk (Marshland Princess); third, £5, T. H. Miller (Fatima). Reserve and highly commended: Earl of Ellesmere (Miss Linton).

Clydesdale filly, two years old.—First prize, £20, R. Tweedie (Mettle); second, £10, L. Drew (Jemima); third, £5, D. McIntosh, Havering Park, Romford, Essex (Violet 2nd). Reserve: C. W. Wilson (Highland Mary).

Suffolk filly, two years old.—Prize, £20, R. Capon, Dennington Lodge, Wickham Market, Suffolk (Mabel the 2nd).

Mare and foal, suitable for breeding hunters.—First prize, £30, G. F. Statter (Lady Lyne); second, £20, B. Bee, Balleaspe Hall, Gouernagh, Preston, Lancashire (Tidy); third, £10, R. Brookbank, jun., Childwall Hall, Liverpool (Sweethear). Reserve and highly commended: E. Peel, Brynypys, Rheabon, North Wales (Gipsy).

Mare and foal, suitable for breeding hackneys, not less than 14 hands 3 inches, and not exceeding 15 hands 2 inches.—First prize, £30, A. Kirby, High Grange, Market Weighton, Yorkshire (Nelly); second, £10, Stand Stud Company (Miss Polly); third, £5, H. J. Bailey, Rosedale, Tebury, Herefordshire (Sybil). Reserve and highly commended: A. Sherratt, Oclepitheard, Hereford (Polly).

Pony mare and foal, not less than 13 hands 2 inches, and not exceeding 14 hands 3 inches.—First prize, £15, B. Gill, Round Oak, Brierley Hill, Staffordshire (Pet); second, £10, R. Y. Gladhill, Park Road, Bradford, Yorkshire (Lady Downs); third, £5, J. Torr, M.P., Ayleby Manor, Great Grimby, Lincolnshire (Lady Godiva). Reserve and highly commended: G. M. Dixon, Bradley Hall, Ashbourne (Mona).

Pair of mares or geldings, not less than 16 hands.—First prize, £30, W. Bramley, Amcotts Villa, Doncaster (The General); second, £15, L. Drew; third, £10, C. W. Brierley, Drinkwater Park, Prestwich, near Manchester (Drayman). Reserve: E. Humphries, Mount Pleasant Hall, Porehore, Worcestershire (Champion).

Pair of mares or geldings, under 16 hands.—First prize, £30, C. W. Wilson (Fanny); second, £15, Stand Stud Company (Brown Bee); third, £10, Mayor, Aldermen, and Burgesses of Liverpool, Municipal Office, Liverpool (Rebecca and The Abbot).

Mare or gelding, not less than five years old.—First prize, £30, C. Beart, Stow-Bardolph, Downham Market (Lioness); second, £10, Earl of Ellesmere, Worsley Hall, Manchester (Honest Lass); third, £5, Earl of Ellesmere (Dainty). Reserve: J. F. Crowther, Mirfield, Yorkshire (Yorkshire Princess). Highly commended: W. A. Meadows, Rainhill, Lancashire (Champion).

Mare or gelding, four years old, not less than sixteen hands.—First prize, £15, L. Drew, Merryton, Hamilton, N.B. (Countess); second, £10, Earl of Ellesmere (Ploughboy). Reserve: H. Smith, Cropwell Butler, Bingham, Nottinghamshire (The Major).

Mare or gelding, four years old, under sixteen hands.—No merit.

Gelding, three years old, any height.—No merit.

Gelding, two years old, any height.—First prize, £15, H. Smith (Governor); second, £10, T. H. Miller, Singleton Park, Poulton-le-Fylde, Lancashire (Merry Tom). Reserve: C. W. Brierley, Prestwich, Manchester (Mischief).

HUNTERS.

Mare or gelding, up to fifteen stone, five years old or upwards.—First prize, £30, Duke of Hamilton, Wickham Market, Suffolk (Winder); second, £15, J. B. Booth, Killyerby, Catterick, Yorkshire (Balderaby). Reserve: C. W. Kellock, Gatesacre, Lancashire (Lady Godiva).

Mare or gelding, up to twelve stone, five years old or upwards.—First prize, £30, T. H. Hutchinson, Catterick, Yorkshire (Glengyle); second, £15, F. Barlow, Woodbridge, Suffolk (Vandyke); third, £10, J. G. Little, Pearth, Cumberland (Sall). Reserve: G. Warren, Woolton, Liverpool (Polly).

Mare or gelding, four years old.—First prize, £30, F. P. Newton, Malton, Yorkshire (Sir George); second, £15, J. Moffat, Crosby-on-Eden, Carlisle, Cumberland (Bonaland); third, £10, H. Rouse, Burley-in-Wharfedale, Yorkshire (Bellona). Reserve: J. Rickerby, Wall Head, Carlisle, Cumberland (Captain).

Daffys, Newport, Monmouthshire (Fairy Queen); second, £20, The Stand Stud Company, of Stand, Whitefield, near Manchester (Rose); third, £10, J. Stewart. Reserve: The S and Stand Company (Dairymaid).

Cow, of any breed, in milk, milking properties to be specially considered.—First prize, £15, J. F. Crowther; second, £10, The Stand Stud Company (Batterie p); third, £5, J. Stewart (Dandy). Highly commended: J. G. Morris, Allerton Priory, Liverpool (Beauty); Commended: F. W. Earle, of Edenhurst, Hutton, Liverpool (Bradford Rose 4th); The Stand Stud Company (Daisy).

SHEEP.

LEICESTERS.

Shearling ram.—First prize, £20, T. H. Hutchinson, Northampton; second, £10, G. Turner, jun., Thorpeclands; third, £5, J. Borton, Manor House, Malton. Reserve and highly commended: R. W. Crosswell, Ravenstone. Highly commended: J. Borton. The whole class commended.

Ram of any other age.—First prize, £20, J. Borton; second, £10, G. Turner, jun.; third, £5, J. Borton. Reserve and highly commended: T. Morris, Croston, Ulsby, Lincashire. Commended: W. Brown, High Gate House, Holme-on-Spalding-Moor, Yorkshire.

Pen of five shearling ewes, of the same flock.—First prize, £15, the executors of the late F. Jordan, Eastburn, Driffield, Yorkshire; second, £10, W. Brown; third, £5, G. Turner, jun. Reserve and highly commended: T. H. Hutchinson.

BORDER LEICESTERS.

Shearling ram.—First prize, £20, J. Melvin, Wilkinton, Mid-Lothian; second, £10, J. Melvin; third, £5, R. Tweedie, Catterick. Reserve: R. Tweedie.

Ram of any other age.—First prize, £20, R. Tweedie. Pen of five shearling ewes, of the same flock.—First prize, £15, R. Tweedie; second, £10, R. Tweedie; third, £5, J. Melvin. Reserve: R. Tweedie.

COTSWOLDS.

Shearling ram.—First prize, £20, J. Gillett, Charlbury, Oxfordshire; second, £10, J. J. Godwin, Troy Farm, Somerset, Deddington, Oxfordshire; third, £5, J. Gillett. Reserve and highly commended: T. Brown, Marham Hall, Downham Market, Norfolk. Highly commended: T. Brown; R. Swanwick, Royal Agricultural College Farm, Cirencester. Commended: J. Gillett (two animals); T. Brown.

Ram of any other age.—First prize, £20, S. Smith, Somerset, Deddington, Oxfordshire; second, £10, J. J. Godwin; third, £5, R. Swanwick. Reserve: R. Swanwick. The class generally commended.

Pen of five shearling ewes, of the same flock.—First prize, £15, R. Jacobs, Signett Hill, Bedford, Oxfordshire; second, £10, J. J. Godwin; third, £5, J. Gillett. Reserve: R. Jacobs.

LINCOLNS.

Shearling ram.—First prize, £20, A. Garfit, Soothern, Lincoln; second, £10, A. Garfit; third, £5, T. Cartwright, Sleasford. Reserve and highly commended: R. Wright, Nocton Heath, Lincoln. Commended: J. Byron, Kirby Green, Sleasford.

Ram of any other age.—First prize, £20, H. Smith, Bingham, Nottinghamshire; second £10, R. Wright; third, £5, J. Pears, Mere, Lincoln.

Pen of five shearling ewes, of the same flock. First prize, £15, J. Pears; second, £10, T. Cartwright; third, £5, R. Wright. Reserve and highly commended: W. and H. Dudding, Wragby, Lincolnshire. Commended: W. Hespalline, Barton-on-Humber.

OXFORDSHIRE DOWNS.

Shearling ram.—First prize, £20, F. Street, St. Ives, Hunts.; second, £10, J. Treadwell, Aylebury; third, £5, J. Treadwell. Reserve and highly commended: A. Brassy, Chipping Norton. Highly commended: J. Treadwell (two animals). Commended: J. Treadwell; G. Street, Maulden, Amptin, Bedfordshire; G. Adams, Faringdon.

Ram of any other age.—First prize, £20, A. F. Milton Drace, Eynsham, Oxon; second, £10, A. F. Milton Drace; third, £5, F. Street. Reserve and highly commended: A. Brassy. Commended: G. Adams.

Pen of five shearling ewes, of the same flock.—First prize, £15, G. Adams; second, £10, J. Treadwell; third, £5, A. F. Milton Drace. Reserve and highly commended: A. Brassy. Commended: J. Treadwell.

SOUTHDOWNS.

Shearling ram.—First prize, £20, Sir N. W. Throckmorton, Bart., Buckland; second, £10, W. Rigden, Hove; third, £5, Sir N. W. Throckmorton. Reserve and highly commended: J. and A. Hanman, Angmering. Commended: H. Gurrage, Kingston-by-Sea; J. J. Colman, M.P., Norwich.

Ram of any other age.—First prize, £20, Lord Walsingham, Thetford; second, £10, Lord Walsingham; third, £5, G. Jones, Great Chesterford, Cambs. Reserve and highly commended: The Duke of Richmond and Gordon, K. G., Goodwood. Commended: W. Rigden; The Duke of Richmond and Gordon, K. G.

Pen of five shearling ewes, of the same flock.—First prize, £15, Sir N. W. Throckmorton; second, £10, H. B. H. The Prince of Wales, K.G., Sandringham; third, £5, Lord Walsingham. Reserve and highly commended: J. J. Colman, M.P. Commended: C. Durham, Watford.

SHROPSHIRE.

Shearling ram.—First prize, £20, H. Townshend, Caldicote Hall, Nuneaton, Warwickshire; second, £10, Lord Chesham, Latimer; third, £5, T. J. Mansell, Dudmaston Lodge Bridge-worth. Reserve: Lord Chesham. Highly commended: H. Townshend; Lord Chesham; T. Mansell, Ercall Park. Commended: T. J. Mansell; (3 animals) C. Byrd, Litlewood, Stafford; T. Mansell; J. Pulley, Lower Eaton, Hereford.

Ram of any other age.—First prize, £20, Lord Chesham; second, £10, T. Mansell; third, £5, H. Townshend. Reserve and highly commended: F. Bach, Onibury, Craven Arms, S. Jop. Highly commended: T. Mansell. Commended: T. Penn, Stonebrook House, Ludlow; J. Pulley.

Pen of five shearling ewes of the same flock.—First prize, £15, Lord Chesham; second, £10, F. Bach; third, £5, T. Nock, Sutton Maddock, Shifnal, Salop. Reserve and highly commended: J. E. Farmer, Fetton, Ludlow, Salop. Highly commended: H. Smith, New House, Sutton Maddock, Shifnal, Salop. Commended: J. Pulley.

HAMPSHIRE AND OTHER SHORT WOOLS.

(Not qualified to compete as Southdowns or Shropshire.)

Shearling ram.—First prize, £20, A. Morrison, Fonthill House, Tisbury, Wilt; second, £10, A. Morrison, Fonthill House; third, £5, H. Lambert, Abington Park, Cambridge.

Ram of any other age.—First prize, £20, J. and M. Arnold, Westmore, Petersfield, Hants; second, £10, H. Lambert; third, £5, A. Morrison.

Pen of five shearling ewes of the same flock.—First prize, £15, J. A. and T. Palmer, Cliddeden, Basingstoke, Hants; second, £10, J. Rigg, Wrotham Hill Park, Sevenoaks, Kent; third, £5, W. Parsons, Monk Sherborne, Basingstoke, Hampshire. Reserve and highly commended: H. Lambert. Commended: T. C. Saunders, Watercombe, Dorchester, Dorset.

CHEVIOTS.

Shearling ram.—First prize, £10, T. Elliott, Hindhope, Jedburgh, Roxburghshire, N.B.; second, £5, R. Shortwell, Attonburn, Kelso, Roxburghshire; third, £3, J. Robson, Birnass, Otterburn, Northumberland. Reserve and highly commended: J. Robson.

Ram of any other age.—First prize, £10, T. Elliott; second, £5, T. Elliott; third, £3, J. Robson. Reserve and highly commended: J. Robson. Commended: J. Robson.

Pen of five shearling ewes of the same flock.—First prize, £10, T. Elliott; second, £5, J. Robson.

BLACK-FACED MOUNTAINS.

Shearling ram.—First prize, £10, C. Armstrong, Ashgill, Alston, Cumberland; second, £5, W. Hindson, Sliddale Hall, Shap, Westmoreland.

Ram of any other age.—First prize, £10, W. Hindson; second, £5, C. Armstrong. Commended: T. Elliott.

Pen of five shearling ewes of the same flock.—First prize, £10, C. Armstrong.

HERDWICKS.

Shearling ram.—First prize, £10, E. Nelson, Garsgrath, Buttermere, Cockermonth, Cumberland; second, £5, G. Browne, Troutbeck, Windermere, Westmoreland; third, £3, W. Leathe, Lamplugh Hall, Cockermonth, Cumberland.

Ram of any other age.—First prize, £10, E. Nelson; second, £5, W. Leathe; third, £3, G. Browne.

Pen of five shearling ewes of the same flock.—First prize, £10, G. Browne; second, £5, E. Nelson. Commended: W. Leathe.

LONKS.

Shearling ram.—First prize, £10, J. Green and Son, Low House Farm, Silsden, near Leeds, Yorkshire; second, £5, G. Dewhurst, Townsend Fold Farm. Commended: G. Dewhurst. Ram of any other age.—First prize, £10, J. Green and Son; second, £5, G. Dewhurst.

Pen of five shearling ewes of the same flock.—First prize, £10, J. Green and son; second, £5, G. Dewhurst. Commended: J. Green and Son.

CARNARVONS.

Shearling ram.—First prize, £10, G. Jones, Wrexham-street, Mold, Flintshire; second, £5, E. Thomas, Pen iar'Wael, Trefnant, Flintshire.

Ram of any other age.—First prize, £10, T. Roberts, Castell, Bangor, Carnarvonshire; second, £5, G. Jones. Reserve: E. Thomas.

Pen of five shearling ewes, of the same flock.—First prize, £10, R. James, Duffryn Aar, Llanrwst, Denbigh; second, £5, R. James. Reserve: G. Jones, Wrexham-street, Mold, Flintshire.

PIGS.

LARGE WHITE BREED.

Boar, above six and not exceeding twelve months old.—No award.

Boar, above twelve months old.—First prize, £10, The Earl of Ellesmere, Worsley Hall; second, £5, R. E. Duckering, Northorpe, Kirton Lindsey, Lincolnshire. Reserve: Earl of Ellesmere.

Pen of three breeding sow pigs of the same litter, above three and not exceeding six months old.—First prize, £10, Earl of Ellesmere; second, £5, Earl of Ellesmere. Reserve and highly commended: J. Godfrey, Wigston Parva, Hinckley, Leicestershire.

Breeding sow.—First prize, £10, Earl of Ellesmere; second, £5, Earl of Ellesmere. Reserve and highly commended: P. Eden, Cross-lane, Salford, Manchester. Commended: E. Thomas, Winsan-groes, Birmingham.

SMALL WHITE BREED.

Boar, above six months and not exceeding twelve months old.—First prize, £10, Earl of Ellesmere; second, £5, Lieut.-Col. B. G. D. Cooke, Colomendy. Reserve: T. Nicholson, Louth-street, Groves, York.

Boar above twelve months old.—First prize, £10, Earl of Ellesmere; second, £5, Earl of Ellesmere. Reserve and highly commended: R. E. Duckering. Commended: S. Wilson, jun., Ramsbottom, Lancashire.

Pen of three breeding sow pigs of the same litter, above three and not exceeding six months old.—First prize, £10, Earl of Radnor, Coleshill House, Highworth, Wilts; second, £5, A. C. Lockwood, Chester. Reserve: Earl of Ellesmere.

Breeding sow.—First prize, £10, R. E. Duckering; second, £5, Earl of Ellesmere. Reserve and highly commended: Earl of Ellesmere. Class generally commended.

SMALL BLACK BREED.

Boar, above six and not exceeding twelve months old.—First prize, £10, G. M. Sexton, Wheatland Hall, Ipswich, Suffolk; second, £5, G. M. Sexton. Reserve and highly commended: T. Comber, Redcliffe, Newton-la-Willows, Lancashire.

Boar, above twelve months old.—First prize, £10, G. M. Sexton.

Pen of three breeding sow pigs of the same litter, above three and not exceeding six months old.—First prize, £10, G. M. Sexton.

Breeding sow.—First prize, £10, Earl of Ellesmere; second, £5, T. Comber. Reserve and highly commended: G. M. Sexton. Commended: C. F. Hallas, 47, Manchester-road, Huddersfield, Yorkshire.

BERKSHIRE BREED.

Boar, above six and not exceeding twelve months old.—First prize, £10, A. Stewart, Gloucester; second, £5, Sir N. W. Throckmorton, Bart., Buckland, Faringdon, Berkshire. Reserve: H. Humphrey, Kingstone Farm, Shrivenham, Berkshire.

Boar above twelve months old.—First prize, £10, W. Hever, Sevenhampton, Highworth, Wiltshire; second, £5, H. Humphrey. Reserve and highly commended: W. Hever.

Pen of three breeding sow pigs of the same litter, above three and not exceeding six months old.—First prize, £10, B. St. John Ackers, Priknash Park, Painswick, Gloucestershire.

Breeding sow.—First prize, £10, Lord Clermont, Ravensdale Park; second, £5, Lord Clermont. Reserve and highly commended: Sir N. W. Throckmorton, Bart. Highly commended: Lord Clermont. Commended: H. S. Woodcock, Wigan, Lancashire; D. Ashcroft, Houghton House, Preston, Lancashire. Class generally commended.

OTHER BREEDS.

(Not eligible to compete in any of the preceding classes.)

Boar, above six and not exceeding twelve months old.—Prize, £10, Earl of Ellesmere.

Boar, above twelve months old.—First prize, £10, S. Wilson, jun., Tanner's Farm, Ramsbottom, Lancashire; second, £5, P. Eden. Reserve: P. Eden. Class generally commended.

Pen of three breeding sow pigs of the same litter, above three and not exceeding six months old.—Prize, £10, R. E. Duckering, Northorpe, Kirton Lindsey, Lincolnshire.

Breeding sow.—First prize, £10, Earl of Ellesmere; second, £5, P. Eden, Cross-lane, Salford. Reserve and highly commended: P. Eden. Commended: P. Eden.

BUTTER.

Firkin of Irish butter.—First prize, £5, W. Foden, Salford; second, £3, G. F. Jackson, Hutton, Chester; third, £2, W. Foden.

Pot or crock of Welsh butter, fourteen pounds or upwards.—First prize, £5, Miss J. Lloyd, Rhallt, St. Asaph, Flintshire; second, £3, T. Owen, Hendy, Carnarvon, N. Wales; third, £2, E. Humphreys, Royal Hotel, Carnarvon, N. Wales.

Pot or crock of English butter, fourteen pounds or upwards.—First prize, £5, J. Marson, Acton Trussell, Stafford; second, £3, T. P. Lyon, Appleton Hall, Warrington, Lancashire; third, £2, W. Sheraton, Broom House, Ellesmere, Salop.

Firkin, crock, or package of Canadian, American, or foreign butter, not less than fourteen pounds each.—First prize, £5, Burdon and Co., Oxford-road, Manchester, Lancashire; second, £3, W. Foden; third, £2, W. Foden.

Six pounds of fresh butter (any make).—First prize, £6, C. J. Batchar, Willaston, Chester; second, £5, W. P. Miller, Merlewood, Grange-over-Sands, Lancashire; third, £4, W. Parker, Great Stanney Hall, Chester; fourth, £3, Lord Chesham, Latimer, Chesham, Buckinghamshire.

CHEESE.

CHESHIRE.

Three cheeses, above fifty pounds' weight each, coloured or plain.—First prize, £20, W. Duddleston, New Lodge Farm, Donnington, Newport, Salop; second, £15, C. Hilditch, Wards Old Hall, Nantwich; third, £10, G. Cross, Sandiway, Northwich.

Three cheeses under fifty pounds' weight each, coloured or plain.—First prize, £15, W. Duddleston; second, £10, T. H. Hodson, Edleston Farm, Nantwich; third, £5, E. Williamson, Wall Stone Farm, Chorley, Nantwich.

LANCASHIRE.

Three cheeses, any weight, plain or coloured.—First prize, £20, W. Kirkby, Rossmore, Kirkham; second, £15, J. Haydock, Swift's House, Heskin, Chorley; third, £10, S. Salthouse, Rossmore, Kirkham.

ANY OTHER BRITISH MAKE.

Three cheeses above fifty pounds weight each.—First prize, £15, W. Duddleston; second, £10, J. Smith, Nap-down Farm, Thornbury, Gloucestershire; third, £5, W. and T. Allen, Crookwood, Ercelfoot, Devizes, Wiltshire.

Three cheeses, above twenty and under fifty pounds' weight each.—First prize, £15, W. Duddleston; second, £10, W. T. Carrington, Croxden Abbey, Uttoxeter, Staffs.; third, £5, J. Haydock, Swift's House, Heskin, Chorley, Lancashire.

CANADIAN, AMERICAN, OR FOREIGN.

Three cheeses, above forty pounds' weight each, coloured or plain.—First prize, £20, J. Spens, Low Ardwell, Stranraer, N.B.; second, £15, Hodgson Brothers, Liverpool; third, £10, Hodgson Brothers.

HAMS AND BACON.

Six British hams (long cut), from eighteen to twenty-eight pounds each.—First prize, £20, J. Kendall, 25, Tancard-road, Liverpool; second, £15, Steen Brothers, Frayle-street, Londonderry, Ireland.

Six Canadian, American, or foreign hams (long cut), from eighteen to twenty-eight pounds each.—First prize, £20, J. T. Davies, 39, North-street, Liverpool; second, £15, J. T. Davies; third, £10, H. Thompson, 9, Elliot-street, Liverpool.

Duffryn, Newport, Monmouthshire (Fairy Queen); second, £30, The Stand Stud Company, of Stand, Whitefield, near Manchester (Rose); third, £10, J. Stewart. Reserve: The S and Stand Company (Dairymaid).

Cow, of any breed, in milk, milking properties to be specially considered.—First prize, £15, J. F. Crowther; second, £10, The Stand Stud Company (Batters p); third, £5, J. Stewart (Dandy). Highly commended: J. G. Morris, Allerton Priory, Liverpool (Beauty); Commended: F. W. Earle, of Edenhurst, Huyton, Liverpool (Trafford Rose 4th); The Stand Stud Company (Daisy).

SHEEP.

LEICESTERS.

Shearling ram.—First prize, £30, T. H. Hutchinson, Northampton; second, £10, G. Turner, jun., Thorpelands; third, £5, J. Borton, Manor House, Malton. Reserve and highly commended: R. W. Crosswell, Ravenstone. Highly commended: J. Borton. The whole class commended.

Ram of any other age.—First prize, £30, J. Borton; second, £10, G. Turner, jun.; third, £5, J. Borton. Reserve and highly commended: T. Marria, Croston, Ulenby, Lincashire. Commended: W. Brown, High Gate House, Holme-on-Spalding-Moor, Yorkshire.

Pen of five shearling ewes, of the same flock.—First prize, £15, the executors of the late F. Jordan, Eastburn, Driffield, Yorkshire; second, £10, W. Brown; third, £5, G. Turner, jun. Reserve and highly commended: T. H. Hutchinson.

BORDER LEICESTERS.

Shearling ram.—First prize, £30, J. Melvin, Wilkinton, Mid-Lothian; second, £10, J. Melvin; third, £5 R. Tweedie, Catterick. Reserve: R. Tweedie.

Ram of any other age.—First prize, £30, R. Tweedie. Pen of five shearling ewes, of the same flock.—First prize, £15, R. Tweedie; second, £10, R. Tweedie; third, £5, J. Melvin. Reserve: R. Tweedie.

COTSWOLDS.

Shearling ram.—First prize, £30, J. Gillett, Charlbury, Oxfordshire; second, £10, J. J. Godwin, Troy Farm, Somerton, Deddington, Oxfordshire; third, £5, J. Gillett. Reserve and highly commended: T. Brown, Marham Hall, Downham Market, Norfolk. Highly commended: T. Brown; R. Swanwick, Royal Agricultural College Farm, Cirencester. Commended: J. Gillett (two animals); T. Brown.

Ram of any other age.—First prize, £30, S. Smith, Somerton, Deddington, Oxfordshire; second, £10, J. J. Godwin; third, £5, R. Swanwick. Reserve: R. Swanwick. The class generally commended.

Pen of five shearling ewes, of the same flock.—First prize, £15, R. Jacobs, Signett Hill, Barford, Oxfordshire; second, £10, J. J. Godwin; third, £5, J. Gillett. Reserve, R. Jacobs.

LINCOLNS.

Shearling ram.—First prize, £30, A. Garfit, Soothera, Lincoln; second, £10, A. Garfit; third, £5, T. Cartwright, Sleaford. Reserve and highly commended: R. Wright, Nooton Heath, Lincoln. Commended: J. Byron, Kirby Green, Sleaford.

Ram of any other age.—First prize, £30, H. Smith, Bingham, Nottinghamshire; second £10, R. Wright; third, £5, J. Pears, Mere, Lincoln.

Pen of five shearling ewes, of the same flock. First prize, £15, J. Pears; second, £10, T. Cartwright; third, £5 R. Wright. Reserve and highly commended: W. and H. Dudding, Wragby, Lincolnshire. Commended: W. Hesselaine, Barton-on-Humber.

OXFORDSHIRE DOWNS.

Shearling ram.—First prize, £30, F. Street, St. Ives, Hunts; second, £10, J. Treadwell, Aylebury; third, £5, J. Treadwell. Reserve and highly commended: A. Brasse, Chipping Norton. Highly commended: J. Treadwell (two animals). Commended: J. Treadwell; G. Street, Maulden, Amptih, Bedfordshire; G. Adams, Faringdon.

Ram of any other age.—First prize, £30, A. F. Milton Druce, Rysham, Oxon; second, £10, A. F. Milton Druce; third, £5, F. Street. Reserve and highly commended: A. Brasse. Commended: G. Adams.

Pen of five shearling ewes, of the same flock.—First prize, £15, G. Adams; second, £10, J. Treadwell; third, £5, A. F. Milton Druce. Reserve and highly commended: A. Brasse. Commended: J. Treadwell.

SOUTH-DOWNS.

Shearling ram.—First prize, £30, Sir N. W. Throckmorton, Bart., Buckland; second, £10, W. Ridden, Hove; third, £5, Sir N. W. Throckmorton. Reserve and highly commended: J. and A. Hasman, Angmering. Commended: H. Gurrage Kingston-by-Sea; J. J. Colman, M.P., Norwich.

Ram of any other age.—First prize, £20, Lord Walsingham, Thetford; second, £10, Lord Walsingham; third, £5, G. Jones, Great Chesterford, Cambs. Reserve and highly commended: The Duke of Richmond and Gordon, K. G., Goodwood. Commended: W. Ridden; The Duke of Richmond and Gordon, K.G.

Pen of five shearling ewes, of the same flock.—First prize, £15, Sir N. W. Throckmorton; second, £10, H.R.H. The Prince of Wales, K.G. Sandringham; third, £5, Lord Walsingham. Reserve and highly commended: J. J. Colman, M.P. Commended: C. Durham, Watford.

SHERBORNE.

Shearling ram.—First prize, £30, H. Townshend, Caldicote Hall, Nuneaton, Warwickshire; second, £10, Lord Chesham, Latimer; third, £5, T. J. Mansell, Dadmaston Lodge Bridge-worth. Reserve: Lord Chesham. Highly commended: H. Townshend; Lord Chesham; T. Mansell, Ercall Park. Commended: T. J. Mansell; (3 animals) C. Byrd, Litlewood, Stafford; T. Mansell; J. Pulley, Lower Eaton, Hereford.

Ram of any other age.—First prize, £20, Lord Chesham; second, £10, T. Mansell; third, £5, H. Townshend. Reserve and highly commended: F. Bach, Onibury, Craven Arms, Salop. Highly commended: T. Mansell. Commended: T. Penn, Stonebrook House, Ludlow; J. Pulley.

Pen of five shearling ewes of the same flock.—First prize, £15, Lord Chesham; second, £10, F. Bach; third, £5, T. Nock, Sutton Maddock, Shifnal, Salop. Reserve and highly commended: J. E. Farmer, Fetton, Ludlow, Salop. Highly commended: H. Smith, New House, Sutton Maddock, Shifnal, Salop. Commended: J. Pulley.

HAMPSHIRE AND OTHER SHORT WOOLS.

(Not qualified to compete as Southdowns or Shropshires)

Shearling ram.—First prize, £30, A. Morrison, Fonthill House, Tisbury, Wilts; second, £10, A. Morrison, Fonthill House; third, £5, H. Lambert, Abington Park, Cambridge.

Ram of any other age.—First prize, £30, J. and M. Arnold, Westmore, Petersfield, Hants; second, £10, H. Lambert; third, £5, A. Morrison.

Pen of five shearling ewes of the same flock.—First prize, £15, J. A. and T. Palmer, Cliddeden, Basingstoke, Hants; second, £10, J. Rigg, Wrotham Hill Park, Sevenoaks, Kent; third, £5, W. Parsons, Monk Sherborne, Basingstoke, Hampshire. Reserve and highly commended: H. Lambert. Commended: T. C. Saunders, Watercombe, Dorchester, Dorset.

CROFTS.

Shearling ram.—First prize, £10, T. Elliott, Hindhope, Jedburgh, Roxburghshire, N.B.; second, £5, R. Shortred, Attonburn, Kelso, Roxburghshire; third, £3, J. Robson, Birnass, Otterburn, Northumberland. Reserve and highly commended: J. Robson.

Ram of any other age.—First prize, £10, T. Elliott; second, £5, T. Elliott; third, £3, J. Robson. Reserve and highly commended: J. Robson. Commended: J. Robson.

Pen of five shearling ewes of the same flock.—First prize, £10, T. Elliott; second, £5, J. Robson.

BLACK-FACED MOUNTAINS.

Shearling ram.—First prize, £10, C. Armstrong, Ashgillside, Alston, Cumberland; second, £5, W. Hindson, Skeddale Hall, Shap, Westmoreland.

Ram of any other age.—First prize, £10, W. Hindson; second, £5, C. Armstrong. Commended: T. Elliott.

Pen of five shearling ewes of the same flock.—First prize, £10, C. Armstrong.

HERDWICKS.

Shearling ram.—First prize, £10, E. Nelson, Gategarth, Buttermere, Cockermouth, Cumberland; second, £5, G. Browne, Troutbeck, Windermere, Westmoreland; third, £3, W. Leathes, Lamplugh Hall, Cockermouth, Cumberland.

Ram of any other age.—First prize, £10, E. Nelson; second, £5, W. Leathes; third, £3, G. Browne.

Pen of five shearling ewes of the same flock.—First prize, £5, G. Browne; second, £5, E. Nelson. Commended: W. Leathes.

LONKS.

Shearling ram.—First prize, £10, J. Green and Son, Low House Farm, Bilsdon, near Leeds, Yorkshire; second, £5, G. Dewhurst, Towson Fold Farm. Commended: G. Dewhurst. Ram of any other age.—First prize, £10, J. Green and Son; second, £5, G. Dewhurst.

Pen of five shearling ewes of the same flock.—First prize, £10, J. Green and Son; second, £5, G. Dewhurst. Commended: J. Green and Son.

CARNARVONS.

Shearling ram.—First prize, £10, G. Jones, Wrexham-street, Mold, Flintshire; second, £5, E. Thomas, Pen Isar'Wass, Trefnant, Flintshire.

Ram of any other age.—First prize, £10, T. Roberts, Castell, Menor, Carnarvonshire; second, £5, G. Jones. Reserve: E. Thomas.

Pen of five shearling ewes, of the same flock.—First prize, £10, R. James, Duffryn Aur, Llanrwst, Denbigh; second, £5, R. James. Reserve: G. Jones, Wrexham-street, Mold, Flintshire.

PIGS.

LARGE WHITE BREED.

Boar, above six and not exceeding twelve months old.—No award.

Boar, above twelve months old.—First prize, £10, The Earl of Ellesmere, Worsley Hall; second, £5, R. E. Duckering, Northorpe, Kirton Lindsey, Lincolnshire. Reserve: Earl of Ellesmere.

Pen of three breeding sow pigs of the same litter, above three and not exceeding six months old.—First prize, £10, Earl of Ellesmere; second, £5, Earl of Ellesmere. Reserve and highly commended: J. Godfrey, Wigton Parva, Hinckley, Leicestershire.

Breeding sow.—First prize, £10, Earl of Ellesmere; second, £5, Earl of Ellesmere. Reserve and highly commended: P. Riva, Cross-lane, Salford, Manchester. Commended: R. Thomas, Winslow-green, Birmingham.

SMALL WHITE BREED.

Boar, above six months and not exceeding twelve months old.—First prize, £10, Earl of Ellesmere; second, £5, Lieut. Col. B. G. D. Cooke, Colomandy. Reserve: T. Nicholson, Lowther-street, Groves, York.

Boar above twelve months old.—First prize, £10, Earl of Ellesmere; second, £5, Earl of Ellesmere. Reserve and highly commended: R. E. Duckering. Commended: S. Wilson, jun., Ramsbottom, Lancashire.

Pen of three breeding sow pigs of the same litter, above three and not exceeding six months old.—First prize, £10, Earl of Badnor, Colleshill House, Highworth, Wilts; second, £5, A. C. Lockwood, Chester. Reserve: Earl of Ellesmere.

Breeding sow.—First prize, £10, R. E. Duckering; second, £5, Earl of Ellesmere. Reserve and highly commended: Earl of Ellesmere. Class generally commended.

SMALL BLACK BREED.

Boar, above six and not exceeding twelve months old.—First prize, £10, G. M. Sexton, Wharfedale Hall, Ipswich, Suffolk; second, £5, G. M. Sexton. Reserve and highly commended: T. Comber, Redcliffe, Newton-la-Willows, Lancashire.

Boar, above twelve months old.—First prize, £10, G. M. Sexton.

Pen of three breeding sow pigs of the same litter, above three and not exceeding six months old.—First prize, £10, G. M. Sexton.

Breeding sow.—First prize, £10, Earl of Ellesmere; second, £5, T. Comber. Reserve and highly commended: G. M. Sexton. Commended: C. F. Hallas, 47, Manchester-road, Huddersfield, Yorkshire.

BERKSHIRE BREED.

Boar, above six and not exceeding twelve months old.—First prize, £10, A. Stewart, Gloucester; second, £5, Sir N. W. Throckmorton, Bart., Buckland, Faringdon, Berkshire. Reserve: H. Humphrey, Kingstone Farm, Shrivenham, Berkshire.

Boar above twelve months old.—First prize, £10, W. Haver, Sevenhampton, Highworth, Wiltshire; second, £5, H. Humphrey. Reserve and highly commended: W. Haver.

Pen of three breeding sow pigs of the same litter, above three and not exceeding six months old.—First prize, £10, B. St. John Ackers, Frinknash Park, Painswick, Gloucestershire.

Breeding sow.—First prize, £10, Lord Clermont, Ravensdale Park; second, £5, Lord Clermont. Reserve and highly commended: Sir N. W. Throckmorton, Bart. Highly commended: Lord Clermont. Commended: H. S. Woodcock, Wigan, Lancashire; D. Ashcroft, Houghton House, Preston, Lancashire. Class generally commended.

OTHER BREEDS.

(Not eligible to compete in any of the preceding classes.)

Boar, above six and not exceeding twelve months old.—First prize, £10, Earl of Ellesmere.

Boar, above twelve months old.—First prize, £10, S. Wilson, jun., Tanner's Farm, Ramsbottom, Lancashire; second, £5, P. Eden. Reserve: P. Eden. Class generally commended.

Pen of three breeding sow pigs of the same litter, above three and not exceeding six months old.—First prize, £10, R. E. Duckering, Northorpe, Kirton Lindsey, Lincolnshire.

Breeding sow.—First prize, £10, Earl of Ellesmere; second, £5, P. Eden, Cross-lane, Salford. Reserve and highly commended: P. Eden. Commended: P. Eden.

BUTTER.

Firkin of Irish butter.—First prize, £5, W. Foden, Salford; second, £3, G. F. Jackson, Hatton, Chester; third, £2, W. Foden.

Pot or crock of Welsh butter, fourteen pounds or upwards.—First prize, £5, Miss J. Lloyd, Rhallt, St. Asaph, Flintshire; second, £3, T. Owen, Hendy, Carnarvon, N. Wales; third, £2, E. Humphreys, Royal Hotel, Carnarvon, N. Wales.

Pot or crock of English butter, fourteen pounds or upwards.—First prize, £5, J. Marson, Acton Trussell, Stafford; second, £3, T. P. Lyon, Appleton Hall, Warrington, Lancashire; third, £2, W. Sheraton, Broom House, Ellesmere, Salop.

Firkin, crock, or package of Canadian, American, or foreign butter, not less than fourteen pounds each.—First prize, £5, Burdon and Co., Oxford-road, Manchester, Lancashire; second, £3, W. Foden; third, £2, W. Foden.

Six pounds of fresh butter (any make).—First prize, £6, C. J. Batchelor, Willaston, Chester; second, £5, W. P. Miller, Marlewood, Grange-over-Sands, Lancashire; third, £4, W. Parker, Great Stanney Hall, Chester; fourth, £3, Lord Chesham, Latimer, Chesham, Buckinghamshire.

CHEESE.

CHESHIRE.

Three cheeses, above fifty pounds' weight each, coloured or plain.—First prize, £20, W. Duddleston, New Lodge Farm, Doanington, Newport, Salop; second, £15, C. Hilditch, Wards Old Hall, Nantwich; third, £10, G. Cross, Sandiway, Northwich.

Three cheeses under fifty pounds' weight each, coloured or plain.—First prize, £15, W. Duddleston; second, £10, T. H. Hodson, Edleston Farm, Nantwich; third, £5, E. Williams, Wall Stone Farm, Chorley, Nantwich.

LANCASHIRE.

Three cheeses, any weight, plain or coloured.—First prize, £20, W. Kirkby, Rossett, Kirkham; second, £15, J. Haydock, Swift's House, Heskin, Chorley; third, £10, S. Salthouse, Rossett, Kirkham.

ANY OTHER BRITISH MAKE.

Three cheeses above fifty pounds' weight each.—First prize, £15, W. Duddleston; second, £10, J. Smith, Nap-down Farm, Thornbury, Gloucestershire; third, £5, W. and T. Allen, Crookwood, Evesham, Wiltshire.

Three cheeses, above twenty and under fifty pounds' weight each.—First prize, £15, W. Duddleston; second, £10, W. T. Carrington, Croxson Abbey, Uttoxeter, Staffs; third, £5, J. Haydock, Swift's House, Heskin, Chorley, Lancashire.

CANADIAN, AMERICAN, OR FOREIGN.

Three cheeses, above forty pounds' weight each, coloured or plain.—First prize, £20, J. Speas, Low Ardwell, Stranraer, N.B.; second, £15, Hodgson Brothers, Liverpool; third, £10, Hodgson Brothers.

HAMS AND BACON.

Six British hams (long cut), from eighteen to twenty-eight pounds each.—First prize, £20, J. Kendall, 25, Tancard-road, Liverpool; second, £15, Steen Brothers, Frayle-street, Londonderry, Ireland.

Six Canadian, American, or foreign hams (long cut), from eighteen to twenty-eight pounds each.—First prize, £20, J. T. Davies, 39, North-street, Liverpool; second, £15, J. T. Davies; third, £10, H. Thompson, 9, Elliot-street, Liverpool.

Three sides of British bacon (Cumberland or Wiltshire cut), from thirty-five to fifty pounds each.—First prize, £20 (No award); second, £15, H. Thompson; third, £10, J. K. ndall.

Three sides of Canadian, American, or foreign bacon (Cumberland or Wiltshire cut), from thirty-five to fifty pounds each.—First prize, £20, J. T. Davies; second, £15, J. T. Davies; third, £10, J. Murrell, Morelands, Birkdale Park, Southport, Lancashire.

CHAMPION PRIZES.

Prize of 100 guineas, given by the Mayor of Liverpool, for

the best agricultural or cart stallion in the show-yard.—The Earl of Ellesmere (Young Samson).

Silver Cup, value £50, given by Lieut.-Colonel Steele, for the best agricultural cart mare or gelding.—Mr. Laurence Drew, of Hamilton (chestnut mare).

Silver Cup, value £50, given by Lord Skelmersdale, for the best Shorthorn male.—Mr. W. Linton (Sir Arthur Ingram).

Silver Cup, value £30, given by The Earl of Bective, for the best Shorthorn female.—Mr. St. John Ackers (Queen of the Georgians).

AGRICULTURAL SOCIETIES.

ROYAL OF ENGLAND.

MONTHLY COUNCIL: *Wednesday, July 4th.*—Present: Lord Skelmersdale, President, in the chair, the Duke of Devonshire, K.G., the Earl of Leicester, the Earl of Lichfield, the Earl of Powis, Major-General Viscount Bridport, Lord Falmington, M.P., Lord Chesham, Lord Vernon, Sir A. K. Macdonald, Bart., Sir W. E. Welby-Gregory, Bart., M.P., Colonel Kingscote, C.B., M.P., Mr. Aveling, Mr. Dent, Mr. Frankish, Mr. Brandreth Gibbs, Mr. Hornsby, Mr. Leeds, Colonel Loyd Lindsay, M.P., Mr. Pain, Mr. Pole-Goff, Mr. Ransome, Mr. Russell, Mr. Shuttleworth, Mr. Torr, M.P., Mr. Wells, Mr. Whitehead, Professor Simonds, and Dr. Voelcker.

The following new members were elected:—Bagnall, Wm. Gordon, of Castle Euxine Works, Stafford. Bassett, Gustavus L., of Tehidy, Camborne, Cornwall. B-swick, William, of Arley, Norwich. Bradford, James, of Bunker-hill, Fencer Houses. Bratherton, George, of Bradwell, Sandbach. Brown, Benjamin, of Wellingham, Brandon. Brown, John, of Weston, Baschurch, Salop. Camm, Thomas, of Osington, Newark. Canner, Edwin, of Stanley Grange, Derby. Chorlton, W. M., of Old Hall, Withington, Manchester. Colvin, Richard Beale, of Monkham Hall, Waltham Abbey. Davenport, James Edward, of Meaford Hall Farm, Stone, Staffs. Davies, Arthur F., of Bayley, Ellesmere, Salop. Davies, Benjamin Lewis, of Gelly, Pampisant, Llandilo, Carmarthen. Dowe, Tom W., of Stone-hill, Drayton, Berks. Gangey, James, of Middleton, Cranbrook. Edge, Benjamin, of Ashe Farm, Ewell, Derby. Edleston, Ralph J., of Rhydderdyfawr, Rhyl. Edwards, Edward, of Cambrian-villa, Newtown, Mont. Edwards, George, of Trevor House, Ruabon. Evans, William, jun., of Hampton House, Ellesmere, Salop. Fairless-Humphreys, N. W., of Bank House, Montgomery. Fisher, John, of Leyton Hall, Blackpool. Foster, Samuel, of Uppingham. Glossop, W. H., of Wood Laitha, Rotherham. Haig, Alexander William, of Pen Ithen, Radnorshire (via Newtown, Mont.). Harrison, Joseph, of 2, Central Beach, Blackpool. Haynes, Henry, of Drayton Bassett, Tamworth. Hiles, John Bickerton, of Wackley, Shrewsbury. Holl, W. F., of Charehstoke. Hudson, Thomas, of Shoot Hill Farm, Ford, Shrewsbury. Hughes, W. C., of Pennant, Ruabon. Johnson, Thomas, of Manor Farm, Wyeough, Malpas. Jones, John Robert, of Batcliff House, Brisbane, Queensland. Jones, Thomas B., of Northwood House, Ellesmere. Koerner, Theodor, of Hofleben, Schönesee, Thorn, West Prussia. Lewthwaite, William, of Broadgate, Broughton-in-Furness. Lynch, Joseph, of Glascoed Hall, Wrexham. Macgregor, Alexander, of Eaton-road, Chester. Marrian, Thomas, jun., of Faucroft Hall, Maltby, Rotherham. Norris, Robert, of Hendry, Rhuddlan.

Mosey, William, of Kiveton Park, Sheffield. Mousley, Edward Joseph, of Galgate Street, Stafford. Nicholson, Francis Frederick, of Stanizell, Brigg. Nicholson, Robert, jun., of Blacou Point, Chester. Pay, John, of Watergate Street, Ellesmere Salop. Plowright, C. H., of Deeping St. Nicholas, Spalding. Power, William Sayer, of Brancote, Stafford. Randles, John Brayne, of Old Heath Farm, Shrewsbury. Roynell, Richard, of Killynon, Killybeg, Ireland. Sly, Joseph, of 11, Westbourne Terrace, Lancaster. Stirton, Thomas, of B-nham Park Farm, Newbury. Stokes, Edward, of Laverton Meadow, Broadway, Worcester-shire. Story, John T., of Hooton Roberts, Rotherham. Style, Albert Frederick, of Hyle Cottage, Maidstone. Sudbury, Richard, of Stafford. Thompson, John Alfred, of Stanton, Winchcombe, Glos. Timmins, Robert, of Dryton, Wrexeter. Tye, James, of Rose Villa, Cranbrook. Vaughan, Edward, of Alford Farm, Middle Shrewsbury. Walker, Horace, of Osgathorpe, Sh. field. Webb, George, of Tunstall, Sittingbourne. Wood, John, of Park House, Hatherston, Nantwich. Wynne, Robert, of Bachymb, d, Denbigh.

The nominations for membership having been read, it was moved by Mr. DENT, seconded by Major-General Viscount BRIDPORT, and carried unanimously:—

That the candidates for election as members of the Society, whose names have just been read, shall be entitled to the privileges of membership at the Liverpool meeting, on paying their subscription for 1877, and signing the usual conditions.

FINANCE.—Colonel KINGSCOTE, M.P., presented the report, from which it appeared that the secretary's receipts during the past month had been duly examined by the Committee, and by Messrs. Quilter, Bill and Co., the Society's accountants, and found correct. The balance in the hands of the bankers on June 30 was £3,301 2s. 2d., and £2,000 remains on deposit. The quarterly statements of subscriptions and arrears to June 30, and the quarterly cash account were laid on the table. This report was adopted.

CHEMICAL.—Mr. WELLS (Chairman) presented the quarterly report of the Chemical Committee, the discussion of which was postponed until the November Council.

GENERAL LIVERPOOL.—Lord CHESHAM (Chairman) reported the following recommendations of the Committee: That the arrangements made by the Local Committee to enable the members of the Society to view the sights of Liverpool be accepted with thanks; second, that sheep be admitted for the purpose of exhibiting the operation of shearing machines in such part of the yard and at such times as the steward of general arrangements may appoint; third, that the Longhorn Society be allowed to hold a meeting in the Members' Club, in the Show-yard, on Wednesday, July 11th, at 3 o'clock. This report was adopted.

HOUSE.—Colonel KINGSCOTE (Chairman) reported several recommendations of the Committee with reference

to the purchase and renovation of furniture, cleaning the house, and re-arrangement of library. This report was adopted.

VETERINARY.—The Hon. W. EGERTON, M.P., stated that the account of the expenditure of the grant of £500 for special investigations made by the Council to the Committee of the Brown Institution last year had been examined by the Committee and approved of. Dr. Burdon Sanderson, F.R.S., had stated to the Committee the course of the investigations pursued during the first half of the current year, and undertook to prepare a complete account of the investigations into foot-and-mouth disease for publication in the next number of the Journal. The experiments on pleuro-pneumonia, as previously reported, will be continued as soon as possible after the complete removal of the cattle plague regulations. The report was adopted.

CATTLE PLAGUE.—Hon. W. EGERTON, M.P., stated that Professor Brown had presented the following report to the Committee:—

The country is not yet officially declared free of cattle plague, but I am in a position to state that the disease has ceased. The prominent facts in the history of the outbreak are already before the Committee, but it may be interesting to make a statement of the localities in which the disease has occurred, and the number of animals which have been sacrificed in consequence.

In England altogether 46 outbreaks occurred among 1,089 cattle, of which 835 were slaughtered healthy, 1 escaped; 253 were attacked with the disease, of which 219 were killed and 34 died.

In the several counties the outbreaks were as follow:—

In Essex 6 outbreaks occurred among 38 cattle, of which 15 were slaughtered healthy; 8 were attacked with the disease, of which 7 were killed and 1 died.

In Lincolnshire one outbreak occurred among 24 cattle, of which 18 were slaughtered healthy; 6 were attacked and killed.

In Middlesex (ex Metropolis) there were 5 outbreaks among 425 cattle, of which 323 were slaughtered healthy; 103 were attacked, of which 86 were killed and 17 died.

In York (East Riding) there were 7 outbreaks among 65 cattle, of which 46 were slaughtered healthy; 19 were attacked, of which 17 were killed and 2 died.

In the Metropolis there were 27 outbreaks among 552 animals, of which 434 were slaughtered healthy, 1 escaped; 117 were attacked, of which 103 were killed and 14 died.

Since the Privy Council took charge of the metropolitan police district, in accordance with the suggestions which were made by the Royal Agricultural Society, the following outbreaks occurred:—

The order under which the action of the local authorities in regard to cattle plague was taken by the Privy Council came into force on April 16th. On April 17th an outbreak occurred at Willenden among 8 cattle, all of which were attacked, and were immediately slaughtered and buried. On April 19th another outbreak occurred at Harlesden Green among 66 cattle, of which 7 were attacked (of which 1 died, 6 were killed diseased), and 58 were slaughtered healthy. On April 22nd an outbreak occurred in the metropolis, in Ledbury-road, Bayewater, among 18 animals, which were all immediately slaughtered. On April 23rd an outbreak occurred at Kensal-green among 75 animals, of which 2 were attacked (1 of which died, and 1 was killed diseased), and the remaining 73 were slaughtered healthy. On the 24th of April an outbreak occurred in Kilburn-lane, Willenden, among 124 animals, of which 1 was attacked and was killed, and the remaining 123 were slaughtered healthy.

On April 25th another outbreak occurred in Ledbury-road among 38 cattle, of which 3 were attacked and slaughtered, the remaining 35 healthy animals were also slaughtered. On May 1st an outbreak occurred in the Stoke Newington district among 41 cattle, of which 10 were attacked and were immediately killed, and the remaining 31 were slaughtered healthy. On May 15th an outbreak occurred in Whitechapel among 5 animals, all of which were attacked, and were immediately slaughtered.

It may be remarked that, shortly after the Privy Council took charge of the metropolitan police district there was reason to entertain some apprehension that the disease was spreading, and energetic measures were necessary for the purpose of suppressing it. The means which were adopted were, fortunately, successful.

At the present time all the regulations which were made by various local authorities under the Cattle Plague Order of 1877 have ceased to operate, and the movement of stock in this country is free, with the single exception of the metropolis. The Metropolitan Cattle Plague Order of 1877, under the provisions of which cattle, sheep, and goats are confined within the metropolitan boundaries, still remains in force. The necessity for this will be apparent when it is stated that in all the premises where cattle plague has existed, fresh stock have been or are now being introduced, and it will consequently be necessary to keep these animals under supervision for some time, in order to avoid the danger which would be incurred should an outbreak occur on previously infected premises; and any infected animals are sent to the Metropolitan Market, and thence removed to various parts of the country. It is hoped that in a short time this only remaining restriction on the free movement of cattle in the country may be removed. This report was adopted.

CATTLE PLAGUE EVIDENCE SPECIAL COMMITTEE.—Sir W. E. Walby-Gregory, Bart., M.P., reported as follows:—Your committee presented no official list of witnesses to be examined as on behalf of the Royal Agricultural Society by the House of Commons' Committee. They have secured, however, that evidence, agricultural or otherwise, should be heard, and have given clerical assistance towards the preparation and presentation of such evidence. Of the names which they suggested to the Council at the last meeting the following have been examined, and your Committee venture to express their belief that the evidence has been felt to be of a most useful and representative character:—Mr. Booth, Mr. Jacob Wilson, and Mr. Rea, as representing English agriculture; Mr. Gillett (exporter), Mr. Link (consignee), and Mr. Burkett (salesman), as representing the American meat trade, as well as Mr. Sheldon with reference to American farming and the probability of future supplies of American meat.

Other witnesses, both practical and scientific, were in readiness if required by the Committee. In addition to this work, Mr. Booth, Mr. Jacob Wilson, and Mr. Jenkins have been continually in attendance at the meetings of the Committee, and materially helped the cause of the enquiry. Looking at the progress of the investigation, the nature and amount of agricultural evidence sent up from other sources, and the limit of time imposed upon themselves by the Committee, your Committee felt it would be inexpedient and indeed unnecessary to press any further evidence of their own. The Committee recommend that the clerical and other expenses, amounting to £8 10s. 8d., be paid out of the grant of £25 voted last month. This report was adopted.

BOTANICAL.—Mr. Whitehead (chairman) reported the recommendation of the Committee that the consulting botanist be provided with forms for recording the results of his investigations undertaken for members of the Society, especially in reference to the germinating power

and the admixture with weeds or worthless matter of samples of seed submitted to him, and that he be requested to furnish quarterly reports of the most important cases that come under his notice. The consulting botanist submitted a revised table of the rates of charge for the examination of plants and seeds, in which the scale of charges is generally reduced and the particulars simplified. The Committee had had before them the following letter and document from the Privy Council in reference to the Colorado beetle.

Council Office, 28th June, 1877.

SIR,—I am directed by the Lords of the Council to acquaint you, for the information of the Royal Agricultural Society, that, in reply to a telegram addressed to the authorities at Cologne, their lordships have been informed that the report of the discovery in a potato field in the neighbourhood of that city of the Colorado beetle in various stages of development has been ascertained to be true.

The field in question has been fired with sawdust and petroleum, but it is said to be feared that the mischief apprehended from the ravages of that destructive insect will spread.

The Lords of the Council instruct me to enclose for the information of the Royal Agricultural Society twenty-five copies of a memorandum relating to the beetle, by the Canadian Minister of Agriculture, together with an engraving of the insect, which their lordships have caused to be sent to all the ports in the kingdom, and to be otherwise widely circulated throughout the country.—I am, sir, your obedient servant,

C. L. PEEL.

P.S.—The Commissioners of Customs have instructed their officers at the various ports to examine every cargo of potatoes from America and Germany, with a view to preventing the importation of the Colorado beetle into this country.

The Secretary, Royal Agricultural Society,
12, Hanover Square.

Intimation having been received from Ontario, Canada, "that the country around that town is swarming with the Colorado beetle," the following Memorandum of the Canadian Minister of Agriculture on the subject of this beetle, which was published in the newspapers of November last, is reprinted, with a coloured engraving of the insect appended thereto.

Privy Council Office, June 1877.

MEMORANDUM OF THE CANADIAN MINISTER OF AGRICULTURE, upon reference of a Despatch of the Secretary of State for the Colonies, on the Subject of the Colorado Beetle.

The undersigned, in accordance with a request of the Secretary of State for the Colonies, having carefully examined the despatches of Lord Carnarvon, respectively bearing date the 3rd of March, 1876, and the 28th August, 1876, has the honour to report as follows:

The occasion of considering measures for the prevention of the introduction of the Colorado potato beetle into other countries from Canada has not yet presented itself, and the information from the German authorities, conveyed to Her Majesty's Minister at Berlin, of the capture of the insect on board ships, and at Bremen, as well as other information given by newspapers relative to its introduction into Sweden, shows that the beetles had come from the United States, having been shipped at ports the neighbourhoods of which were invaded by them.

The document furnished to Her Majesty's Minister at Berlin, a copy of which forms part of the despatch of the 28th of August last, contains the following remark:

"It may be considered an almost insoluble problem in regard to transatlantic ships' traffic to prevent by more extensive supervisory measures the introduction of these beetles in Europe."

The difficulty thus foreseen by the German authorities cannot but be self-evident when the habits and modes of progression of the insect are examined; for not only does it move by flying, and by navigating, so to speak, smooth water, but also travel on common vehicles, railway carriages and plat forms, on decks of vessels, &c., especially during the months of August and September.

In localities fully invaded the beetles may be seen creeping on side-walks, bridges, and wharves, crawling up buildings,

occupying fences, lodging themselves in every crevice, penetrating houses, and dwellings, ascending and occupying vehicles of all sorts, finding their way into boats and vessels, placing themselves on any and every article, and being found alive after a long sojourn in situations where there would seem to exist no chance for them to find any subsistence.

Such a short but correct *expose* of the habits of the beetle as connected with the possibility of its penetrating almost anywhere, and by almost any means of transport, renders indeed insoluble the problem of absolutely preventing its inroad into new fields of devastation, no matter how remote or by what obstacles they may be separated from the regions already invaded.

It may be remarked in this respect that potatoes and their covering are neither more nor less apt to harbour the insect than anything else.

But if the absolute repelling of the invader is unfortunately beyond reach, the extent of the disaster is fortunately in a very great measure under control, involving, of course, care and expense.

The remedies which necessity has taught on this side of the Atlantic are such as to require for their application the joint efforts of the community at large, kept alive to its interest and duties by the authorities, and men of devotedness to the common welfare.

These remedies are—

1st. Searching for and crushing every potato-beetle wherever found.

2nd. Frequent visits to the potato fields, and searching for the eggs deposited on the under-side of the leaves of the potato-vine; and

3rd. Watching for the presence of the larvae on the buds, and on the leaves of the plant, in order to destroy them by means of *Paris Green*, the only substance yet discovered to be effectually operative on a large scale for the destruction of the insect in its larvæ state.

By these means, and by these means only, the invaded American States, and the Western part of Canada, have been able to secure potato crops in a measure commensurate with the care and energy bestowed, and by similar means only can the invasion be retarded and lessened in its effect.

No measure has been taken in Canada, for reasons given, to prevent the falling or creeping of individual insects on board ships loading in Dominion seaports.

There is, however, almost a certainty that the environs of Montreal will be invaded next year, and with that prospect in view general orders may be given to public officers (and employes of the ports to look for and destroy any beetles which might be observed on the wharves, on sheds, on packages of goods to be embarked, or on board ships. A general appeal might also be made to all persons having to deal with the shipping for assistance in the execution of such preventive measures.

The undersigned respectfully recommends the adoption of such precautions, beyond which he does not see that there is anything within the power of the Canadian Government to do.

The whole respectfully submitted.

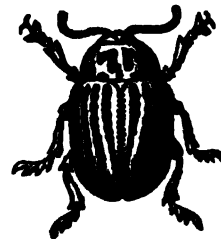
(Signed)

L. LATRELLIER.

Department of Agriculture, Ottawa,
6th October, 1876.



LIFE SIZE.



MAGNIFIED.

Being impressed with the importance of this subject, the Committee recommended that a letter, signed by the President, should be sent to the Privy Council, calling

attention to the fact that the introduction of the beetle is more to be dreaded in materials used for packing than with the potato. Potatoes are imported from America in casks, without packing, and, during the winter and early spring, when the beetle is hibernating, and unlikely to be imported. In view of the very large importation of potatoes from Germany, and the recent appearance of the beetle there, the danger is much greater of its introduction into Great Britain from that country. The Committee are further of opinion that the document issued by the Privy Council, giving figures of the beetle in its perfect stage *only*, is not calculated to assist materially in its detection, as it would be much more likely to be introduced during the late spring and summer months in its larva or pupa state than as a perfect insect. They, therefore, suggest that the Government be urged to distribute throughout the country figures of the insect in all its stages, and for this purpose again call their attention to the plate published in the Society's *Journal* for 1875, in illustration of Mr. Bates' paper on the subject.

This new danger has again drawn the attention of the Committee to the desirability of placing within the reach of members of the Society competent advice on injuries caused by insects to farm crops. Subject to the approval of the Council, they have arranged with the Consulting Botanist to obtain such information and advice for members of the Society at a small rate. With the view of making this sufficiently known, the Committee recommend, that a copy of these revised and additional privileges be sent to each member of the Society, together with instructions as to the methods of conveying information in regard to any injuries which their crops may suffer from insect or other cause, and specially directing the attention of members of the Society to the paper on the Colorado beetle by Mr. Bates, and to the accompanying illustration.

Mr. WHITEHEAD, in moving the adoption of this report, stated his conviction that the Society should give every possible facility to its members to enable them to procure the best scientific advice on all matters pertaining to agriculture, and he would on that account alone be quite prepared to give notice for the appointment of a special entomologist to the Society. The subject of injurious insects had attracted considerable attention of late, and the recent conference held by the Society of Arts, and the document which had just been read with reference to the Colorado potato beetle, together with other matters, showed that an increased importance was being attached to the subject of agricultural entomology. It had, however, been pointed out to him that, in view of the grave danger which was suggested in the letter from the Privy Council, it would be necessary to do something *at once*, even although it might be in the nature of a temporary expedient, and therefore he had conferred with the Society's botanist, and found him quite prepared to fall in with any arrangement that might be made with a view to his obtaining for the use of members of the Society such entomological aid as they might require, and without any addition to his present fee. The Committee had therefore drawn out a scheme of privileges, subject to the approval of the Council, as stated in the report. He wished further to draw particular attention to the fact that the Privy Council in their letter seemed to point to the imported potatoes as being the only probable vehicle by means of which the beetle could be conveyed to this country, whereas it appeared from the investigations made on behalf of the Society two years ago, that the beetle was more likely to be conveyed in packing material than in the casks of potatoes, which were imported in comparatively small quantities, and exclusively for seed purposes. He therefore regarded such substances as hams and bacon and American meat, which were packed in

canvas, and which constituted a large trade, as forming a greater source of danger.

Mr. DENT suggested that an extract from the notice sent with the letter of the Privy Council should be sent to each member of the Society, together with a copy of the plate which had already appeared in the Society's *Journal*.

LORD ESINGTON, M.P., observed that the beetle appeared to have been introduced into Germany by American hams and bacon, or in the substances in which those materials were packed, and he urged that the Privy Council should investigate the matter to its furthest point, and give the most complete information possible, with a view to assist in the detection of the insect not only in the ports but throughout the country.

This report was adopted.

SHOWYARD CONTRACTS.—Mr. AVELING reported the recommendation of the Committee that the contractor be paid the sum of £1,600 on account of showyard works, as duly certified by the surveyor.

THE SECRETARY was authorised to sign and seal an agreement with the authorities of Bristol with reference to the country meeting of 1878, subject to certain provisions. The appointment of the General Bristol Committee was deferred until the meeting of the Council to be held in the showyard on Wednesday July 11th.

A letter was read from Mr. RIGDEN, withdrawing his resignation as a member of the Council.

PETERBOROUGH.

(Abridged from the *Peterborough Standard*).

The annual exhibition of the Peterborough Agricultural Society opened on Thursday, July 5. The morning was beautifully fine, and a pleasant air was stirring, making it delightful to be upon the ground, which, in comparison with several neighbouring show grounds, is laid out to excellent advantage. The spacious riding and jumping arenas are the admiration of all strangers, and the general arrangements are so excellent that if they do not give satisfaction to all concerned it is because satisfaction could not possibly be given. The show of horses, although smaller than last year, was an excellent one, and comprised some animals fit to compete anywhere. The horned stock was a most interesting collection, and the number and quality were good. There, perhaps, never has been on the Boroughbury ground so many pigs at previous shows, and certainly the quality has not been excelled.

PRIZE LIST.

JUDGES.—NAG HORSES: E. Paddison, Ingleby; J. M. K. Elliot, Heathcote; T. H. Hutchinson, Catterick. CART HORSES: J. Plowright, Pinchbeck; J. E. Parsons, Charwellton. CATTLE: E. Wortley, Ridlington; E. A. Fawcett, St. Albans. SHEEP AND PIGS AND IMPLEMENTS: T. Plowright, Pinchbeck; S. Rooke, Gretton; F. Battock, St. Ives. BUTTER: W. Bodger, Peterborough.

HORSES.

NAGS.

Hunter of any age.—First prize, £25, T. H. D. Bayly, Ollerton (Rosington); second, £10, W. Whitehead, Wollaston (Vanguard).

Hunter of any age.—First prize, £15, W. Whitehead (Vanguard); second, £10, J. Hornsby, Grantham (Jericho).

Hunter, of any age, calculated to carry 12 stone.—First prize, £10, T. Benton, Hunts; second, £5, J. Hornsby (Hidalgo).

Four-year-old for hunting purposes, by a thorough-bred horse.—First prize, £10, W. Whitehead (Sportsman); second, £5, S. Stokes, Stamford (Revolver).

Special Jumping Prize.—To the best jumper in classes 1, 2, 3, and 4.—First prize, £8, J. Cossin (Blue Peter); second, £3, Dr. Waller (Ravely).

Best horse, not less than 14 hands high, to be exhibited in harness.—First prize, £10, W. Benton, Peterborough; second, £5, J. Baker, Wisbech (Daisy).

Hackney not exceeding 15½ hands high.—First prize, £7, J. Hornsby (Hidalgo); second, £3, W. Benton.

Weight-carrying cob, above 13 hands 2 inches, and not exceeding 15 hands.—First prize, silver cup, value £5, T. Hornsby; J. L. Row, Woodstone.

Best jumper in classes 5, 6, and 7.—First prize, £4, Dr. Waller (Esperance); second, £2, Mr. Barford (Messenger).

Pony not exceeding 14 hands.—First prize, £5, R. Bland, Boston (Red Robin); second, £3, W. Benton; third, £1, C. H. Kirby, Glapthorne.

Pony not exceeding 13½ hands.—First prize, £5, W. Palmer, Peterborough; second, £3, T. Callow, Castor (Brown Bear).

Pony not exceeding 12½ hands high.—First prize, £3, Hunts; second, £2, R. Wallis, Thorne.

Three-year-old for hunting purposes.—First prize, £7, J. S. Blott, Great Staughton; second, £3, J. Goodlife, Huntingdon.

Two year-old for hunting purposes.—First prize, £7, J. L. Wright, Peterborough; second, £3, C. J. Sampson, Waternewton.

Yearling for hunting purposes.—First prize, £7, J. Laurence, jun., Warmington; second, £3, T. Carter, Ailesworth.

Yearling got by Lydon.—Extra prize, £5 5s., J. Laurence, jun., Warmington.

Mare suitable for hunting purposes, with foal at foot, got by a thorough-bred stallion.—First prize, £10, J. Goodlif, Huntingdon (Evangeline); second, £3, J. Topham, Peterborough.

Foal in this class.—Prize, £3, the Marquis of Exeter.

Foal as above, got by Lydon.—First prize, £5, J. Topham; second, £3, T. Searle.

Hackney mare, not exceeding 15½ hands, with foal at foot.—Prize, £5, J. S. Mack, Postland.

CART-HORSES.

Pair of cart-horses.—Prize, £10, H. Bird, Peterborough.

Pair of bay horses, 5 and 8 years.—Prize, £5, J. Smith, Whittlesey.

Cart-mare, with foal at foot.—First prize, the Howell Cup, value £10, C. Golden, Benwick (Empress); second, £5, R. H. Griffin, Borough Fen.

Foal in the class.—Prize, £3, W. B. Vawser, March.

Cart-gelding, rising three years old.—First prize, £5, P. Griffin (Powder Blue); second, £3, C. Daintree, Huntingdon.

Cart-hilly, rising three years old.—First prize, £5, E. Whitton, Ramsey (Smiler); second, £3, T. Fullard, Thorney.

Cart-colt, rising two years old.—First prize, £5, K. Neal, Boston Fen; second, £3, C. Shepperson, Glassmoor.

Cart-hilly, rising two years old.—First prize, £5, R. Hopper, Whittlesey; second, £3, R. Hopper, Whittlesey.

Cart-horse of any age.—Royal Agricultural Society of England's first prize one-horse cart, value £30, W. G. Maxwell, Peterborough.

CATTLE.

Ox, without restrictions as to feeding, (open to all England).—First prize, £10, R. Wright, Lincoln; second, £5, W. Werth, Helbeach Marsh.

Fat cow or heifer.—First prize, £5, R. Wright, Lincoln; second, £3, J. J. Sharpe, Kettering (Price Bad).

Bull, above two years old.—First prize, £10, the Marquis of Exeter, Stamford (Telemachus 9th); second, £5, T. H. Bland, Dingley Grange.

Bull, under two years old.—First prize, £10, T. G. Foljambe, Workop (Flag of France); second, £5, T. H. Bland, Dingley Grange.

Bull-calf, under one year old.—First prize, £5, T. H. Bland, Dingley Grange; second, £3, J. Turner, Haddon Grange.

Special prize, best Shorthorn in Classes 25, 26, 27.—Silver cup, value £40, the Marquis of Exeter.

Cow, having had a live calf within 12 months, and being still in milk or in a breeding state.—First prize, £10, Lady Pigot, Surrey (Ezra); second, £5, J. J. Sharpe, Broughton (Julia 11th).

Heifer, in calf or in milk, under three years old.—First prize, £7, Lady Pigot (Rosalba); second, £3, C. W. Griffin, Peterborough (Blushing Rose).

Heifer under two years old.—First prize, £5, T. H. Bland, Dingley Grange; second, £3, G. A. Ashby, Ragby (Innocence).

Heifer calf under one year old.—First prize, £4, G. A. Ashby (Dorothy); second, £3, the Marquis of Exeter (Carolina).

Pair of cows of any breed, for dairy purposes, not eligible for entry in the "Herd-book."—Prize £5, S. Pegg, Peterborough.

Special prize.—Best Shorthorn in Classes 28, 29, 30, 31, 32.—Silver cup, value £10, Lady Pigot (Rosalba).

SHEEP.

Long-woolled ram, of any age, the property of, or hired for the use of, the exhibitor.—First prize, £7, Captain Catling, Wisbech; second, £3, E. J. Howard, Lincoln.

Five long-woolled ewes, having suckled a lamb up to 31st June preceding, and having been the property of the exhibitor not less than nine months previous to the exhibition.—First prize, £5, Captain Catling; second, £3, 10s., J. M. T. Mole, West Deeping.

Five long-woolled shearling ewes, bred by exhibitor.—First prize, £5, E. J. Howard, Lincoln; second, £3, 10s., Captain Catling.

Ten long-woolled ewe lambs, bred by exhibitor.—First prize, £5, Captain Catling; second, £3, S. Middleton, Waternewton.

Five long-woolled wether lambs, bred by exhibitor.—First prize, £4, S. Middleton; second, £3, T. Johnson, Peterborough.

Pen of five cross-bred lambs, bred by exhibitor.—Prize £4, J. Lewin, Wyton, Hunts. Only one exhibitor.

Pen of three shearing wethers, of any breed.—First prize, £4, and second £3, W. Wells, Holmes.—Cross-bred wether sheep (1 year 3 months 2 weeks), Hampshire ram, Lincoln ewe; cross-bred wether sheep (1 year 3 months 2 weeks), Hampshire ram, Lincoln ewe.

PIGS.

Boar of the large breed.—First prize, £3, J. B. Vargate, Holmes; second, £1, C. Daintree, Huntingdon.

Boar of the small breed.—First prize, £3, and second £1, S. Spencer, Holywell.

Breeding sow of the large breed.—First prize, £3, S. Spencer; second, J. Turner, Haddon.

Breeding sow of the small breed.—First prize, £3, and second £1, S. Spencer.

BUTTER.

Three pounds butter.—First prize, £1, E. A. Skrimshin, Stanground; second, 10s., Mrs. J. V. Smith, Peakirk.

Three pounds butter (Alderney excluded).—First prize, £1, T. Nottingham, Ufford; second, 10s., Mrs. W. H. Cropley, Peterborough.

SHORTHORN.

The annual meeting of this Society was held on July 13, in a marquee at the Royal Agricultural Show in the Newsham-park, Liverpool. Lord Skelmersdale occupied the chair, and those present included the Duke of Manchester, the Earl of Bective, Mr. A. P. C. Starkey, M.P., and others. In their report the Council noticed that since last year's show at Birmingham, five life members and 129 annual members had died, 40 annual members had withdrawn, 1 annual member had been removed from the Society by order of the Council, and 80 life members and 18 annual members had been added. The Society now consisted of 424 life members and 647 annual members, making a total of 1,071, an increase of 53 members. The accounts showed a balance of £794 16s. 6d. A large sum having been expended in the purchase of the copyright and stock of back volumes of the *Herd Book*, the Council had invested £1,000 as the nucleus of a reserve fund to provide for the Society's liabilities as regards its life members, and for future contingencies. The Council elected Lord Penrhyn president and Lord Skelmersdale vice-president for the ensuing year. The Council had elected the Duke of Manchester as a member of the Council in the room of Lord Skelmersdale (elected vice-president of the Society), and Mr. W. Talbot Crosbie in the place of the Rev. John Store, deceased. The other vacancies in the Council had arisen by the resignation of Mr. R. E. Oliver and Mr. George Savill; and the Earl of Feversham and Mr. Samuel Porter Foster, of Kullhow, Cumberland, had been elected to fill such vacancies.

During the recent outbreaks of cattle-plague in this country the Council addressed a communication to the Lord President of the Council, calling attention to the prevalence of foot-and-mouth disease as a calamity, and urging that the breeders of stock in the United Kingdom should be protected as far as possible from the importation of foreign diseases, seeing that the losses incurred in the home produce by such diseases greatly exceeded the total value of foreign cattle imported; and that stringent and uniform measures should be adopted throughout the United Kingdom for the suppression of infectious diseases and severe penalties vigorously enforced for offences against such measures.

Mr. B. ST. J. ASKES moved the adoption of the report, and said, one of the most important points of the present day was the importation of foreign cattle. It was most important, not only to farmers but also to the inhabitants of large towns and the consumers of meat generally: but until the Society

could induce townspeople to see that cheap meat depended upon the absence of disease and upon the freedom of breeding, a satisfactory state of things would not be arrived at. He hoped the result of the Parliamentary Committee now sitting would be to protect the breeders and the public generally from the importation of disease.

The report was unanimously adopted.

Colonel KINGSFOTE took the opportunity of commending the course taken by the Council in regard to the diseases of cattle. As a member of the Parliamentary Committee he had attended every meeting. The question must be taken up not by Short-horn breeders alone, as it affected the whole country; and when the evidence taken before the Committee came to be published, everybody, he thought, would see how extraordinarily strong was the evidence as to the great cost which the foot-and-mouth disease had entailed upon the country.

SALE OF MR. GEORGE FOX'S SHORTHORN CATTLE,

AT ELMHURST HALL, NEAR LITCHFIELD, ON THURSDAY, JULY 5TH.

BY MR. THORNTON.

This is evidently to be a trial sale—at least so we judge by the catalogue. Of course, at this nervous period, when the market yet heaves with the groundswell of the cattle plague panic, and when, moreover, all but the wealthiest are obliged to rein in, owing to the financial depression that will temporarily make itself felt to the furthest nerve of society, it would be, to say the least, unbusiness-like to expose to unkind chance gems which have been collected on every side, regardless of expense, but by the suggestion of an excellent taste. Still, there are cattle of great value to be sold, and there is the cross of the noble 24th Duke of Airdrie to gild them. Keenly alive to the necessity of maintaining pure springs of old blood, Mr. Fox, on reflection, decided to invest largely in that which, considering the demand of the future, the wide unpopulated foreign lands, the rate of human increase, and the approved excellence of the cosmopolitan Shorthorn, is as safe to pay ultimately those who can afford to hold on, as the buying up of acres adjoining a young town which is flush with the vigour of a prosperous settlement—a plan which has been the making of more than one millionaire in our time. Shorthorn females whose attributes trace through a lengthened ancestry, no matter what the particular family, only provided they can show their origin to be comparatively unstained, there will be an increasing demand for. The most ordinary farmer is awaking fast to the value of pedigree. But of course upon this occasion, under the risk of the time, Mr. Fox cannot be expected to set forth his best for sale. His whole herd we inspected with much gratification almost a year ago, and writing in anticipation we venture to predict that there will be brought on this occasion before Mr. Thornton a basket of plums from which those who want will select for themselves according to the hue and flavour which is their special fancy. Such was the idea the first reading of the sale catalogue threw before us, and now the day arrived we proceed to describe how it stood the test of fact. It is an idea which we now find to have pervaded many minds, and in one instance a *coterie* of skilled authorities sat down, pen in hand, to make their calculation of the probable issue of the day's sale. Although their figures did not tally with the prices obtained, still, in a lump sum of nearly six thousand guineas, they only missed their mark by about ninety points. Arrived upon the scene of action, we find the cows and heifers in the meadows adjoining the homestead. On our way down we had passed through a collection of noble kine, which were being herded in the

park by a couple of boys, one of whom was quick in disgorging their respective names as a trout is in swallowing the May fly. The bulls came on parade, and the judges pronounce the 24th Duke of Airdrie to "have very little fault," which, in fact, was merely a sort of cautious proviso, for when it came to dissection there was little to uphold depreciation at all. One said his tail-line was slightly high, another, and he was right, in our opinion, thought it was merely that the "fool's point" (the bone on either side the tail) was an inch or so too low. Imagine the impossibility of larger condemnation! What a long, meaty quarter he has! Such loins and fore-flank! He is undoubtedly a success in breeding, and he illustrates also, by his kindly temper the wisdom of the plan they follow across the water in their treatment of the males. There is a comparatively small but business-like assemblage in the tent, where the Duke of Manchester takes the chair. Mr. Fox in a frank and cheery speech won the hearts of all; and we adjourn to the ring. The first lot, Joan of Arc, a long, roomy cow, wanting only the plane over her tail, bred by Mr. Sheldon, and unserved, went cheap for fifty-five guineas to Mr. Court. Mr. Cheney bought her from Mr. Sheldon; then Lord Fitzhardinge owned her, and from Berkeleys he came to Elmhurst. A heifer of hers brought 358 guineas at Col. Kingscote's sale. Lot 2: Lady Waterloo 22nd, secured by Lord Moreton, a "very cheap cow" it was exclaimed on all sides, is long, full of quality, and has a look of old Gondomar about her that is very pleasing to the eye. Earl's Flower, a good roomy cow, goes to adorn the pastures of a small pet model farm in Gloucestershire. Butter fly Princess 22nd, unserved, was selected by Lord Bective on inquiry before she was put up, who, with a prompt generosity which certainly told upon the audience assented to her remaining at Elmhurst for service. Imusical 2nd, by Baron Oxford 4th, a deep-symmetrical roomy cow, having the loveliest horns, flat and incurved, and almost too free of stain, Mr. Drewry secures a great bargain. Her dam made 360 guineas at Holker. "Don't like the Grenadier cross" murmurs a gentleman at our elbow, not uninterested in the old bull, her sire. But the Holker sage is superior to prejudice, especially as regards practice such as produced Third Grand Duke, and we shall hear of this cow's progeny again. Lady Superior Spencer is withdrawn, having slipped her calf. She is one of the best cows upon the place, and is indebted, through her great grandaunt 2nd Duke of Airdrie, to Mr. S. E. Bolden's successful experiment, El Hakiins, him-

aire, having been got by Grand Duke out of Fame. Then we reach the excitement of the sale. A Red Rose is set forth. There is so much varied feeling as to this imported tribe, of which all who have visited Mr. Renick's herd speak in such raptures that it was impossible to say what she might fetch, from 50 to 1500, no one was prepared to say. The specimens in England of the sort undoubtedly show great quality and elegance of form. The general public is, as yet, a wee bit timorous about them, and so she fell very cheap to the bidding of Mr. Alsop for 430 guineas. Her sire, a grandsire and great-grand sire, were all bred by the "American Bates," Mr. A. Renick. Cambridge Knightley, a good-backed cow, goes to Mr. Court. Then the excitement awakened again. Another Red Rose, roan (it is said there never has been a white one), advances. As the two stood together in the paddock men's opinions varied, but, on deliberate study, seemed to settle on this one. She has a large patch of white at the girthing point of her belly, which absorbs the eye too much, and interrupts the regularity of the under-line. She is, as they are all, very long, and has a capital front, and is, in fact, capital all over from hoof to rib. Her face is peculiarly but prettily marked with a sort of tortoiseshell pattern. Mr. Alsop wisely secured her again for about what she cost Mr. Fox—eleven hundred guineas. Then we have a capital cow of very mixed but excellent blood, bearing the elsewhere appropriated appellation of Surmise. She went cheap to Mr. Seckham, a new buyer. He also took the next cow of Scaleby Castle origin. Honeydew 2nd, having the Fawley Erigone foundation, a thick wealthy heifer with horns a trifle coarse, reminds us somewhat in character of a carcass of the West Highlander. A few rebels in a corner had just ventured to whisper this when Mr. Thornton, by way of encouragement to the bidding, exclaimed "Why this tribe made ninety guineas a-piece in the Highlands!" The guilty looked aghast at each other. Had they been overheard, or was it a fact? It was, however, really, and more than that, this identical heifer had never been into Scotland at all! Of course her relatives must have sent her the Argyleshire mode, as ladies get dress patterns through *The Queen* newspaper. A Garland cow is picked up a bargain by Mr. Brogden. Then Mr. Secomb gets a big fine-backed heifer of the Butterfly Princess tribe; and a good fleshy one, with well-sprung rib, and a rather Red Rose look, called Elvira's Rose, goes to Mr. Drummond for ninety-two. Christmas Gwynne, a mellow, thick-fleshed, substantial white heifer, Lord Bective selects. The result of her union with the glorious Duke of Underley we shall be curious to see; there ought to be flesh and style in the offspring. Then another Gwynne, Harefield Gwynne, a heavy, good roan heifer by that concentrated bull Grand Duke of Weston 3rd, makes 360 ga., and is entered to the familiar name of Knowles. Then Lady Weston Waterloo, having curious back-turned horns, black tipped, fetches only 72 ga. "They've done a rare lot of polishing on these 'ere horns, as much as ever I seed," an Arcadian observes of Weston's Musical, the daughter of Mr. Drewry's purchase, and bought by Mr. Lovett. Excitement again awakens with the introduction of the white Harefield Darlington, a daughter of Deepdale, about the best cow of the many good ones at Elmhurst, and bred by Lord Bective. This heifer is wealthy-fleshed, and shapely, and shows her parentage in the back-turning of horns, which, however, are free from black. That she is somewhat calf-kneed is no discredit, we presume, to a cow, however it may affect the value of a horse. Then succeed a few fair ones causing no astonishment, until Geneva's Kirklevington Duchess arrives upon the scene (how did she obtain her stylish decidedly Booth-ruled quarter?) and a grand duel takes place between Sir W. Salt and Mr. Alsop,

resulting in the victory of the latter for 700 ga. Elmhurst Princess goes cheap, very cheap, to Lord Bective, being thick, level, capital, as they must be for that herd. The last Red Rose, Red Rose of Severn, had been ailing with scour, so Mr. Alsop obtains her for only 255 ga. It is a tribe that must come out, and will supplement, not supplant, as some fear, the olden tribes of one inheritance. The bulls, a thick good lot, went cheap, it being a bad time of the year for such, a Darlington calf, however, born in May, making ninety-three guineas—it is a tribe that has so thoroughly now asserted its position in the market. There is a noble lot left at Elmhurst Hall, and the next sale, the authorities declare, will be a stinging one, at least for the public.

COWS AND HEIFERS.

Joan of Arc.—Mr. Court, 55 ga.
 Lady Waterloo 2nd.—Lord Moreton, 78 ga.
 Earl's Flower.—Mr. Bliss, 81 ga.
 Butterfly Princess 2nd.—Lord Bective, 77 ga.
 Musical 2nd.—Mr. Drewry, 120 ga.
 Grace Rose 4th.—Mr. Alsop, 430 ga.
 Cambridge Knightley.—Mr. Court, 85 ga.
 Second Cambridge Lady.—Mr. Alsop, 1,100 ga.
 Surmise.—Mr. Seckham, 51 ga.
 Empress 4th.—Mr. Seckham, 67 ga.
 Honeydew 2nd.—Mr. Walter Williams, 82 ga.
 Lady Florence 4th.—Mr. Brogden, 50 ga.
 Butterfly Princess 26th.—Mr. Seckham, 65 ga.
 Elvira's Rose.—Mr. Drummond, 92 ga.
 Christmas Gwynne.—Lord Bective, 235 ga.
 Harefield Gwynne.—Mr. Knowles, 360 ga.
 Lady Weston Waterloo.—Mr. Lovett, 72 ga.
 Weston's Musical.—Mr. Lovett, 67 ga.
 Harefield Darlington.—Lord Bective, 185 ga.
 Lady Weston Florence.—Mr. G. Graham, 80 ga.
 Weston's Honeydew.—Mr. W. Williams, 76 ga.
 Lady Weston Valiant.—Mr. Court, 45 ga.
 Weston's Gwynne.—Mr. Lovett, 250 ga.
 Weston's Columbia.—Mr. G. Graham, 115 ga.
 Elmhurst Mazurka.—Mr. Bliss, 70 ga.
 Weston's Flower.—Mr. Bliss, 48 ga.
 Weston's Snowdrop.—Mr. Chester, 38 ga.
 Geneva Kirklevington Duchess.—Mr. Alsop, 700 ga.
 Elmhurst Princess.—Lord Bective, 275 ga.
 Weston's Empress.—Passed.
 Lady Worcester Wild Eyes.—Mr. Lodge, 200 ga.
 Airdrie Knightley.—Mr. Hamer, 60 ga.
 Red Rose of Severn.—Mr. Alsop, 255 ga.
 Lady of the Valley.—Mr. Court, 32 ga.
 Water Belle.—Mr. Lovett, 100 ga.

SUMMARY.

Total amount, £8,054 6s. 0d.
 Average, £178 1s. 4d.

BULLS.

Weston's Graceful.—Mr. Chirnside, 30 ga.
 Baron Gwynne.—Mr. Clerk, 27 ga.
 Weston's Beau.—Mr. Paxton, 40 ga.
 Baron Spencer.—Mr. Stubbs, 30 ga.
 Duke of Liverpool.—Passed.
 Royal Duke 2nd.—Mr. Todd, 33 ga.
 Second Elmhurst Prince.—Mr. Robinson, 35 ga.
 Butterfly Prince.—Captain Furniss, 76 ga.
 Lord Leicester.—Mr. Darling, 5 ga.
 Airdrie Songster.—Mr. Robinson, 45 ga.
 Butterfly Prince.—Mr. C. Fox, 16 ga.
 Baron Cragga.—Passed.
 Darlington Duke.—Mr. Darling, 93 ga.

SUMMARY.

Total amount, £451 10s. 0d.
 Average, £41 10s. 0d.

COL. H. B. LANE'S SHORTHORNS.

After Mr. Fox's herd Col. Lane's herd was disposed of, Col. Kingscote obtaining a splendid Cowslip cow for a mere song as compared with her real worth, both in blood and shape.

Ballet Girl.—Mr. C. Fox, 29 ga.
 Cowlip 4th.—Mr. Barrett, 78 ga.
 Sweetheart 4th.—Mr. P. C. Naylor, 62 ga.
 Wellington 8th.—Famed.
 Belinda 2nd.—Mr. J. Morton, 30 ga.
 Clarence Sweetheart.—Mr. Atkin, 51 ga.
 Columbine.—Mr. Morton, 21 ga.
 Cowlip.—Mr. Barrett, 66 ga.

SALE OF THE WAULDBY HERD.

The herd of Shorthorn cattle at Wauldby, Brough, near Hull, the property of Mr. Richard Botterill, was disposed of on July 20, by public auction. This herd was established about seven years ago by the purchase of twelve cows and heifers, of the old Farnley blood, from the representatives of the late Mr. Dawson, of Weston Hall; other animals were obtained from the Earl of Zetland's old established herd, as well as from Mr. J. B. Faviell's sale at Stockfield Park, Wetherby. From the celebrated Gaddesby herd selections were made of the Waterleaze tribe, and the herd also contained a number of animals of the favourite Beverley family. The catalogue contained the pedigrees of nineteen cows and heifers and eleven young bulls.

COWS AND HEIFERS.

Orange Blossom.—Mr. J. W. Hamilton, 62 ga.
 Laurel—31 ga.
 Rosina.—Mr. Francis, Keyingham, 31 ga.
 Uplatham Rose.—Mr. Francis, 34 ga.
 Countess Claremont.—Mr. Simons, Motttingham, 70 ga.
 Spencere 5th.—W. H. Carter, Horness, 46 ga.
 Lady Leonora 3rd.—Jno. Singleton, Pocklington, 27 ga.
 Blanche Duchess 2nd.—Mr. J. Crust, Catwick, 50 ga.
 Lady of Lyons 7th.—Mr. T. C. Dixon, Brandesburton, 42 ga.
 Lady Valentine 6th.—Mr. Harland, Holme Wold, 28 ga.
 Gwynne Princess 6th.—Mr. F. Barroby, Thirsk, 41 ga.
 Gwynne Princess 7th.—Mr. W. Ashburner, Ulverstone, 81 ga.
 Spencere 10th.—Mr. J. Webb, Uleaby, Lincolnshire, 30 ga.
 Uplatham Rose 2nd.—Mr. J. Watson, West Ella, 25 ga.
 Blanche Duchess 3rd.—Mr. J. Watson, 44 ga.
 Gwynne Princess 8th.—Mr. W. Ashburner, 100 ga.
 Lady of Lyons 8th.—Mr. Hopper, Kelliehorpe, 32 ga.
 Lady of Lyons 9th.—Mr. Crust, 18 ga.

BULLS.

Beverly Oxford.—Mr. Parker, Howden, 29 ga.
 Beverly Oxford 2nd.—Mr. England, Bilton, 30 ga.
 Iron Duke.—Mr. J. Leonard, Burstwick, 61 ga.
 Beverly Oxford 4th.—Earl of Scarborough, 17 ga.
 Oxford 16th.—Mr. Farrell, Burnley, 50 ga.
 Underley Prince.—Reserved at 100 ga.
 Oxford 19th.—Mr. Wallgate, Aldborough, 25 ga.
 Beverly Oxford 5th.—Mr. R. Lambert, Patrington, 28 ga.
 Oxford 20th.—Mr. Staveley, Tibthorpe, 30 ga.
 Beverly Oxford 6th.—Mr. A. Botterill, 13 ga.

COWS AND HEIFERS (FROM DAIRY STOCK).

Road cow.—Mr. Stiekney, Douthorpe, 22 ga.
 Road cow, calved in 1872.—Mr. Stiekney, 29 ga.
 Road cow, calved in 1873.—Mr. Stiekney, 28 ga.
 Road cow, calved in 1873.—Mr. Leonard, 30 ga.
 Heifer, calved in 1876.—Mr. Dunhill, Market Weighton, 24 ga.
 Heifer, calved in 1876.—Mr. Harland, Holme Wold, 20 ga.
 Heifer, calved in 1876.—Mr. Richardson, Rugby, 27 ga.
 Heifer, calved in 1876.—Mr. Wright, Humbleton, 20 ga.
 Heifer, calved in 1876.—Mr. J. Danby, 15 ga.
 Snowball 3rd, calved in 1876.—Mr. England, 25 ga.
 Heifer, calved in 1876.—Mr. Wright, 24 ga.

BULLS.

Ball, calved in 1876.—Mr. Martram, 14 ga.
 Ball, calved in 1876.—Mr. Wright, 16½ ga.
 Ball, calved in 1876.—Mr. Wright, 17½ ga.
 Ball, calved in 1877.—Mr. J. Watson, 7 ga.
 Ball, calved in 1877.—Mr. A. Botterill, 10½ ga.
 Ball, calved in 1877.—Mr. T. Carter, Garton, 6½ ga.

After the sale of the Shorthorns a few long-woolled rams were sold, very few making more than the reserve of five guineas.

AGRICULTURAL CO-OPERATION.

The general meeting of members of the Agricultural and Horticultural Co-operative Association, whose head-quarters are in Milbank-street, Westminster, was held on Friday, July 20th, in the house adjoining the Show-ground at Liverpool, which the Association took for the use of its members attending the Royal Show. There was a good attendance of members, the chair being occupied by Mr. Daniel Robert Scratton, J.P., of Osgill, Newton Abbott, a member of the governing Council. The other members of the present Council of the Association include Vice-Admiral Hornby, Messrs. Thomas Hughes, Q.C., Wm. H. Anthony (formerly of Liverpool); Walter Morrison, Edward Vansittart Neale, Alexander K. Allerton, Richard Hardacre, Wm. Marshall, Frederick H. Newton, Major Carlton Smith, and Captain Wm. Taylor.

The Tenth Annual Report stated that the Council have the gratification to report on a period of almost unexampled progress. In a time of great commercial depression the Association has increased its sales from £66,400 in 1875-76 to nearly £90,000 in 1876-77. This increase of £23,000 in one year is more than double the largest increase in any previous year. The chief cause is doubtless the confidence inspired by ten years of honest supply of pure and unadulterated goods. The gross profits have been £6,400 8s. 2d., or about 7 per cent. upon the sales. Year by year the members have reaped advantages in successive reductions of price until the gross profits, which averaged over 13 per cent. at the outset, are now barely half the former percentage. The members are now being regularly supplied with articles of the very highest quality at prices frequently lower than they were formerly paying private dealers for inferior goods. The outside agricultural public, too, has been greatly benefitted by the general reductions in price and abatements allowed for cash. The working expenses remain almost unaltered, notwithstanding the large increase in the business. The total expenses have been £3,359 11s. 6d., or 3½ per cent. upon the sales. The previous year they were £3,286 15s. 6d., or nearly 5 per cent. on the sales. Notwithstanding the low prices at which goods are sold, the net profits of the year amount to about 17½ per cent. on the share-capital, after paying 5 per cent. on deposits. The total gross profits is, therefore, thus accounted for in the present accounts:—

£807	7	8	Interest on Shares
748	14	6	Interest on Deposits
446	13	4	Profit allowances on Seeds
459	4	5	Profit allowances on Implements
658	18	3	Surplus absorbed as named.

£23,120 16 8.

The report and balance-sheet were unanimously adopted by the meeting. Dr. Voelcker, Professor Sibson, and Mr. Dyer were re-elected as consulting analysts. A suggestion to appoint an official consulting botanist was referred to the Council. A resolution proposed by a member involving censure upon the management fell through for want of a supporter, and an amendment expressing confidence in Mr. Edward Owen Greening, the Managing Director, in appreciation of his services, was carried unanimously. Some discussion took place upon trade prices and customs in Liverpool, and the proceedings closed with a vote of thanks to the Chairman.

It is stated that in ten years the Association has returned in interest and profit allowances to its members £16,937, besides supplying pure goods, carefully tested by analysis, and sold at very low prices. The Society commenced with 7 members, ending its first year with 147 members, and has now 1,113. Its share capital is £16,495, and its deposit capital £14,279. It has branches in Liverpool, Southampton, and other places.

AN AMERICAN FLORA is in course of preparation by Mr. Thomas Meehan. From what we have seen of the manuscript, by favour of the author, the work will happily combine the scientific with the "popular," that is to say, it will be a work of scientific value, sufficiently embellished with anecdote and poetry to render it attractive to the mysterious being known as the "general reader."—*The Gardeners Magazine.*

THE AMERICAN GRANGES AND AGRICULTURAL UNITY.

Mr. J. P. SHELDON, Sheen, Ashborne, Derbyshire, recently read the following paper before the Maidstone Farmers' Club:—

The first part of my paper may be conveniently devoted to giving you a concise history and description of the most remarkable and important agricultural movement of this age, and indeed of any previous one—I allude to the American order of "the grange." In all probability but few English farmers have more than an imperfect knowledge about, and many of them have scarcely heard of, "the grange," or, as it is otherwise called, "patrons of husbandry." This at first sight appears strange when we reflect that the grange is a purely agricultural organisation, and that it has become a great power on the other side of the Atlantic. The absence of knowledge about the order may, however, in some measure be accounted for by the wide-spread dislike which we English unwisely cherish against most things of American origin. And, indeed, the order has grown up in a quiet and unpretentious manner, minding its own business, and opposing none but manifest abuses.

This great idea of agricultural combination occurred first of all, it appears, to the mind of Mr. O. H. Kelley, a Minnesota farmer, and it is very interesting to read how he and the few other men whom he had succeeded in interesting, met, time after time, to discuss the great and pressing problem of rural reform. In his "History of the Patrons of Husbandry," * Mr. Kelley gives us a faithful and vivid picture of the various difficulties under which they laboured, and the disappointments they had to endure; and he tells how, when their project had begun to attract notice, a few of the newspapers supported the idea, and how others—the ordinary bigoted ones—assailed it with all the rancour of which they were capable, and how they laughed to scorn the idea of farmers uniting in the pursuit of any co-operative principle whatever. As in England, so in America, farmers seemed to possess no faculty for combination; and we cannot wonder that they were deemed to be incapable of collective action, of combination, of cohesion—for hitherto they had given no evidence of possessing these qualities. And, indeed, there are many men in England who declare their belief that to our farmers, as a class, the principles of unity and organisation are utterly foreign, and that the present generation, at all events, will never learn to combine for mutual benefit, for progress, and for liberty. I venture to doubt the truth of these assumptions, for I fancy I can see the co-operative idea gradually, though somewhat slowly, but still surely, making its way amongst us. Let us once more become familiar with the idea, and its practical development is assured. The fact that English farmers seldom will have anything to do with a thing they do not fully understand reflects, indeed, great credit on them, so far as the virtue of discretion is concerned, and it is undoubtedly a safeguard to them against the pitfalls into which other classes of our citizens tumble at times with marvellous ease; but, at the same time, it is no less true that a virtue carried to excess becomes equivalent to a vice.

In the year 1866 Mr. Kelley was employed by the Department of Agriculture to make a tour of inspection through "the States lately in hostility against the Government," with a view of obtaining statistical and other information, the collection of which had been suspended during the war. It was during this tour that the idea occurred to him of forming a secret society of agriculturists, with a view of restoring kindly feeling amongst the people. His observations forced upon him the conviction that the "politicians would never restore peace to the country; if it came at all, it must be through fraternity." This social feature was, however, not the only nor even the most important one; it was with justice contemplated that the order would prove to be an important factor in all departments of agricultural progress, and that it

would tend to remove certain disabilities and abuses by which American farmers as a class were oppressed.

The order is a young one, indeed very young. The first grange was formally established, though in a very small way, on December 4, 1867. There were then only a very few men and women who were interested in the matter, but these were full of earnestness and energy. They worked with untiring zeal and perseverance; and, indeed, without these qualities being present in the eminent degree they were, the task would have been impossible to accomplish. Numberless disappointments and obstacles were met and overcome; but, interspersed among these, came occasional encouragements and assistance which helped to balance matters. After a time, spent in organising granges in certain parts of the country which were desirous to give them a trial, the fullest success came. I copy here a sentence from the publisher's preface to Mr. Kelley's book:—"The unprecedented success of this Institution is one of the most prominent incentives on record to perseverance under trying and almost insurmountable difficulties." Again, this time I quote from the address of the master of the national grange, delivered at the eighth session, held at Charleston, South Carolina, February 3rd to 16th, 1875:—

"This uprising of a great and scattered interest has not a parallel in the history of the world. The magnitude and force of the movement have surprised its friends, and astounded and alarmed its foes. It has burst upon us with the suddenness of the erratic comet, yet promises to remain with the brilliancy and permanency of the sun. It found the agriculturists of the nation unorganised, isolated, unrecognised, weak, plodding, and their voices virtually unheard in the councils of the land. To-day they are organised, united, strong, thoughtful, and duly respected and recognised as one of the great powers that be.

The language here used is rather magniloquent, but it nevertheless expresses a great and important fact. This will be understood when I state to you that there are at the present time upwards of 24,000 granges, with an aggregate membership of upwards of a million. The order first took root in Washington in a small and feeble way, and was confined to a few persons who believed they saw great power for good in it. It has since spread from the Atlantic to the Pacific, and from far north of the great lakes to the Gulf of Mexico.

Having given a necessarily short and imperfect historical sketch of an order which can hardly fail to be interesting to the farmers of other countries than America, being, as it is, confined to the farming classes of that country, I may now go on to describe with equal brevity what the grange is, giving an outline of some of its principle features, and to a limited extent a sketch of the *modus operandi* which has been adopted:—

The grange is purely an agricultural organisation. No persons are admitted to it whose principal occupation is not agriculture, or whose calling may in any way be regarded as alien to the interests of agriculture, or who have anything which may conflict with the purposes of the order. It is not merely a social and ideal order, like that of freemasonry, eschewing as much as possible the active work of every-day life; but, in addition to the amenities and ornamentalities which, in common with freemasonry, it tends to confer on life, it is thoroughly practical in everything which relates to the business of the husbandman. The grange resembles freemasonry in this—it is a secret order; secret, that is, so far as its meetings go, and as to the business transacted thereat; but its secrecy, equally with that of freemasonry, is one of the most pleasant and harmless kind; nay, in this it has improved on freemasonry, and there is less of an *air* of mystery about it. The measure of secrecy which the grange has adopted is no more than is found necessary by large commercial firms in the transaction of their business, and it was adopted simply to add an element of interest to the order, and to enable the members to keep their own counsel.

The grange differs from all other organisations of the same kind in this most important particular—ladies are admitted to full membership. In the olden times, when secret orders were much more common than they are now, women were not ad-

* "Origin and Progress of the Order of the Patrons of Husbandry in the United States." By O. H. Kelley, secretary of the National Grange. J. H. Wagonseller, publisher, Philadelphia.

mitted to any participation in the pleasures or benefits derived therefrom; and they were not excluded merely because they were judged to be constitutionally incapable of keeping a secret—a cruel and stupid superstition which, strange to say, still lives in some minds—but principally because the sex was universally regarded as vastly inferior to man in all respects, and in consequence unfit to participate with him in the higher amenities of life. This amounted to an article of faith, and was even concurred in by the women themselves. But all this sort of thing is now changed, and woman has properly come to be regarded, morally and intellectually, as the equal of man; and her claim to enjoy equal privileges of life and equal protection and encouragement is now generally recognised. The grange has happily laid hold of this great fact in our advancing civilization, and there can be no manner of doubt that a great part of its astounding success, and also a great portion of its immense influence, is owing to the wise and just position which has been given to woman in the ceremonies and in the business of the order. She holds offices in it which are equal in honour and dignity with those held by men, and this position, far from being in any sense opposed to that of the male members, simply supplements and adorns it.

The method of conducting the meetings of the granges resembles, but is simpler than the ritual of Masonic lodges. It is also far less constrained, and is more devoted to a discussion of topics which have a general bearing on the fortunes of the members. Two subjects only are not permitted to be discussed in grange meetings—politics as a part of nature and religion. When a question arises, possessed of more than ordinary interest for grangers as individuals or as a body, on which it is desirable that a general and collective grange opinion be obtained, it is submitted by the national grange to each state grange, and by the state granges to the county granges in their respective states, and by the latter to each subordinate grange in their respective counties. The opinion of each grange is thus easily obtained, and forwarded to the state grange, which then represents to the national grange the result of the inquiry. Knowing this, the national grange can speak with powerful authority. The Master for the time being speaks in the name of a million persons, each of whom occupies a more or less substantial position, and is interested in the best welfare of the country. I need not point out the immense potency embodied in such a system as this.

As in England, so in America, and everywhere else, farmers are the backbone and mainstay of the nation. They are the food-producers—they sustain the life of the people. And as their capital, to a not insignificant extent, is buried in the soil they cultivate, and as they cannot realise it except by the lapse of seasons and in the course of nature, it follows that they are less a shifting population than almost any other class of our citizens, and that their interest in the prosperity of the state is a decidedly fixed and tangible quantity. Now, it will not be denied that an order which has bound together the disjointed elements of so vast and important a class as the farmers of America—bound them together in a bond of union which has already been of incalculable service to them, socially, financially, and politically—is a very practical order indeed.

You will now be on the point of inquiring what the grange has done in the interests of American farmers to entitle it to the great consideration and esteem with which it is regarded by its members. I will not trouble you now with details as to the influence it has had on the interests of agricultural progress, because it has adopted similar means to that end that your Club here has done—namely, the reading of papers, addresses delivered, discussions on these, and so on; and you are consequently in a position to apprehend the value of this feature of the grange even better than I am. Going beyond these, however, it has established co-operative societies, by means of which farmers are now supplied with agricultural machines and implements, and with various other necessities of their calling, on reasonable terms instead of unreasonable terms heretofore; it has brought producer and consumer into closer intercourse, thereby lessening to the latter the costs of the necessities of life without diminishing the just profits of the former; it has brought about a system of direct trading, by means of grange agencies, between agricultural implement manufacturers and farmers; it has established a system of cash payments for goods supplied—a reform in itself of incalculable importance and advantage, based on the grand old dictum, "Keep out of debt, and you keep out of danger." In a word, it has done away with a number of surplus

middle-men, the loss of whose services has been found to be an advantage to every one concerned but themselves.

One of the best features of the organisation of the Patrons of Husbandry is the settlement of differences, whether pecuniary or otherwise, between members by arbitration. Instead of going to law, and seeing lawyers, officers, and courts, and spending time and money to secure some legal or technical advantage of a neighbour, by the plan introduced in the granges all those little questions of dispute are now settled in an equitable, and generally in an amicable, manner by reference to committees or arbitrators consisting of mutual friends. It is true that this plan deprives the lawyers, officers, and courts of a great deal of business, but while they are losers in a pecuniary way, the farmers are the gainers, not only in a pecuniary sense, but in many other ways. Friendship between individuals is thus promoted and maintained, difficulties affecting neighbourhoods are avoided, and the whole community are greatly the gainers, while outsiders are none the wiser.

But beyond these merely local and personal matters the grange has soared in its aims, and has grappled successfully with certain interests which are of national rather than of class importance. I may mention the courage with which it has strenuously opposed certain evils more or less connected with American railroad enterprises. Among these evils are such schemes as the "Credit Mobilier," the watering of stock, lavish gifts of public land and money without proper restrictions, lending the national credit for payment of interest on railroad bonds without proper security for repayment, granting railroad corporations such unlimited powers that many of them persisted in charging exorbitant freights and fares. These things told heavily against the industry of the farmer. He could not get his grain to market without paying on them a freight which almost swallowed up the whole proceeds from the sale of the goods. The grange properly held the opinion that corporations, no less than individuals, should be subject to laws securing the rights and privileges of all citizens alike. The railway companies disregarded this assertion of a broad and beneficent principle; the sequel I quote from *The Pacific Rural Press* of March 17 in the present year:—"This very action of these railroad companies had more to do with the organisation of the Order of the Patrons of Husbandry, and its extraordinary growth in the West, than any other cause. The farmers realised the fact that they had to fight the monopolists with their own weapons, or, in other words, to form among themselves combination equally strong, binding, and lasting. Though not a political organisation, yet the emergency led the farmers to unite in electing legislators favourable to their interests; consequently laws were enacted regulating fares and freights on railroad lines. The courts were invoked to enforce these laws, and here again the grangers had to come to the front; money was needed and raised, and eminent counsel were employed on both sides. Beaten in the lower courts, the railroad companies took an appeal to the Supreme Court of the United States, and that august tribunal, on the first day of the present month (March), rendered its decision affirming the right of the legislature of a State to enact laws regulating the fares and freights on railroad lines within the limits of its jurisdiction and territory."

The decision regarding railway companies in America and their customers, the public, therefore stands thus recorded:—"That until Congress undertakes to legislate for the whole country, it is within the jurisdiction of each or any State to regulate, when they become exorbitant, and consequently oppressive, the fares and rates imposed by the companies on their customers within the territory of such State. *Prima facie* this decision may appear to some amongst you as undue interference with freedom of contract; but I need go no farther in removing this impression, if it be entertained by anyone, than to remind you that our Parliament has for some time exercised a similar discretionary control over our English railroads, and I scarcely think anyone will be prepared to say that such control is either unjust or unnecessary."

I might go on to tell you interesting facts concerning reforms which the grangers have brought about in the commercial world of Western America, but that my paper would run a risk of swelling out into unreasonable and tedious limits. One gigantic system of monopoly I must, however, briefly refer to, that of the great "Wheat Kings," as they were termed, whose centre was chiefly in Chicago, but whose operations

extended over all the great grain-raising States of the West, even including golden California. For details of this great monopoly, which very seriously injured the agriculture of the States over which it spread its upas-branches, I must refer you to Dr. E. S. Carr's interesting pages.* Suffice it here to say that the great "Wheat Kings"—the monopolists—the capitalists—the bankers—had established a network of agencies over these Western States, by which they manipulated the grain markets to suit their own advantage. They circulated false quotations of the English markets to deceive the farmers, and thus placed them at a disadvantage, the results of which were equally favourable to the capitalists and unfavourable to their victims. Beyond this, and to make their power the more secure, these monopolists got control of the various railways and rivers by which the grain was conveyed to the shipping ports, and they were thus able to prevent the farmers, as individuals, sending their grain to any market except by passing it through their hands. Not content with this, they always were careful to charter all ships which were in the habit of loading grain at San Francisco and at other ports on the Pacific coast, so that if any grain happened to reach the ports independently of themselves they could prevent its being shipped off to foreign markets, except at rates of which they had the fixing themselves. As you may imagine, this great tyranny became intolerable to the agriculturists of the West, and you will not be surprised that they were anxious to adopt some means or other by which they could break through the imposition. The order of the grange had been formed a few years before the period (1871) to which I am now more particularly alluding, and to this the Western farmers turned their eyes as the means by which they could unite their scattered interests into a strong, compact organisation, which would enable them to have free access to the best markets for their produce. There were always existing in these States farmers' clubs and other agricultural societies, but no bond united any two of these together, no system of interdependence had been established among them; hence they, as societies, were as practically impotent for combined action in the desired direction as were the farmers themselves as individuals. The grange system, however, altered all this. The farmers' clubs and societies became subordinate granges, and these were in turn affiliated to the State granges, and thus was combined action secured.

The farmers united, there was at once an end to the monopolies which had galled and oppressed them. The "rings" which the capitalists had formed, and their great network of agencies, fell to pieces like a house built of cards. The grange established an agency of its own, whose office was to secure to the members reliable quotations of foreign markets and the best prices for their produce. For the Pacific States the grange has built in San Francisco its own business association and its bank buildings, and to judge from the engravings of these, which are given in Dr. Carr's book, they are ornaments to the city in which they stand. The farmers are thus their own merchants and bankers. They ship their own grain and other produce to Europe, and those of them who have occasion to borrow money in advance on their crops, borrow it from their own fraternity, and not from outside capitalists. It is to this organisation that we in England owe the cheap corn of various kinds which we now receive from the far West, which comes to us with the number of intermediate profits on it greatly reduced—hence its marvellous cheapness. And I may, in face of the above facts, venture to predict that we shall always have cheap bread from America, except in case of failure of crops or from some other cause over which man has no controlling power. Last, though not least, in this connection I may point out the excellent openings for the investment of farmers' capital with which the farmers are provided by these various combined enterprises; it is the true co-operative principle which is employed, and it is absolutely free from the vicissitudes and panics, from the liability to insolvency, to which ordinary commerce is continually exposed. In these beneficent enterprises the farmers of the West have already many millions of dollars invested, and there is ample room for the investment of hundreds of millions more as the plans are more and more developed.

I now pass on to the second part of my paper—a very short

part, I assure you—viz., how does the subject of which I have hitherto spoken affect the farmers of this country? I am not now concerned to advocate the formation of granges in England, because I am not sure either that the country is ripe enough for organisation, or that the grange, as it exists in America, is exactly the thing to suit our insular and old-fashioned tastes. Apart entirely, however, from the question of granges becoming introduced into our islands, it is impossible that British agriculture and British agriculturists should avoid being directly or indirectly influenced by the existence and the work of such an order on the other side of the Atlantic. American productions have all along, throughout the present century more particularly, been exercising a continually-increasing influence over English farming. The removal of the last vestige of protective duties on imported corn has placed American farmers on exactly the same footing as our own in British markets, except for the cost of transit, and this is now a comparatively insignificant item. With the exception of live cattle, in time of plague, restrictive duties and conditions are placed on no kind of food coming to this country from abroad which competes with the English farmer in his own department. Corn, beef, mutton, cheese, butter, all come in freely, subject to none but natural disabilities; and the English farmer has to compete with the rest of the world on perfectly even terms so far as the commercial or marketing aspect of the case is concerned, but on very uneven ones so far as restrictions go.

There is no room, gentlemen, to dispute the fact that English farmers are heavily handicapped in the race they are running and must run against their numerous foreign competitors. As a set-off against the cost of transit of their produce to our markets, the American farmers have their land for next to nothing. What the English farmer pays as rent for one year only would purchase the fee-simple of the same quantity of land, of a better quality, and in a better climate, in some of the Western States of the Union. It fell to my lot a few years ago to travel through a good many of the States, and I was then strongly impressed with the belief that, with their superior natural advantages, the American farmers would soon push the English farmers very hard into a corner, if, indeed, they would not push them out of the field altogether, unless something substantial was speedily done to relieve the burdens of the latter. I do not intend to say that the American farmers are growing fat as fast as the English farmers are growing lean. This is probably not the case. But the American farmers push the English farmers none the less hardly on account of this. It is none the less a fact that they are able so to push them. In fact they are bound so to push; this is a growing necessity of their existence as farmers out yonder. English gold they must have, and English gold they are determined to have.

Now, what must be done to place English farmers on a more favourable, or, rather, on a less unfavourable footing? I yield to no man in desire for free-trade, and in appreciation of the immense benefits which it has conferred on this country. But, as a natural sequel to free-trade I want to see something else free. This something else is freedom from the vexatious disabilities and restrictions in tenancy agreements, which now practically tie English farmers' hands behind their backs. Gentlemen, I propound it to you as one of the strangest anomalies of our time, that our statesmen, with far-seeing wisdom, should have given us the measure they did of what is called free-trade with foreign countries and that they should have given no corresponding freedom of action to the English farmer.

There are also many reforms, of a political rather than of a social nature, which need to be brought about in order that farmers may occupy that just and fair position which they have a right to demand. The greatest and most pressing of these is Tenant Right. I may not now enlarge on this all-important topic beyond saying that a compulsory Tenant-Right law of the land, made as much in the interests of farmers as of landlords—that is, in the interests of neither party—such a law as this becomes each year increasingly necessary to the prosperity, nay, to the very existence, of the tenant-farmer of this country. It is no more than bare justice that the capital of a tenant-farmer should be just as much his own as the capital of the tradesman, the merchant, the banker, nay, the landlord himself, is their own, and it is only equally fair that he should be as able to realise his capital as they are to realise theirs.

* "The Patrons of Husbandry on the Pacific Coast." By Ezra S. Carr, M.D., LL.D., late Professor of Agriculture in the University of California, San Francisco: A. L. Bancroft and Co. 1876.

It is no less necessary to the maintenance of the farmer in his position as an important factor in the industrial element of this country that the present disastrous restrictions on cropping, and on the selling off of produce, should be done away with. At present we have permission to buy, in one form or another, as much manure as we like on our farms. There is no restriction to this; but we are securely bound not to sell off anything except what the landlord or his agent kindly permits. The opponents of the abolition of these restrictions say that they are imposed as a check on tenants who would otherwise impoverish their farms. This is mere claptrap. You know, gentlemen, quite as well as I do and better, that an impoverishing tenant cannot make ends meet and tie in these days; and, again, he would only impoverish one farm, for no landlord would allow him to experiment the same way on a second. Then look at the difference in the general reputation and character of an improving tenant when compared with that of one who impoverishes? Bad farming pays no one, either in pocket, in character, or in anything else. It is necessary, therefore, and expedient, that to all kinds of farm produce the principles of free-trade should be extended to the utmost.

The game laws are no less a standing disgrace to this country and to the present age, than they are a fruitful source of loss, of danger, of crime, and of heartburning. If not entirely abolished, these laws need to be greatly modified.

Taxation of all kinds, local as well as imperial, requires to be placed on a sounder foundation than it at present enjoys, so that the land may bear no more than its just burden. Because the farmer's income can be so easily arrived at is no reason at all that he should be made to contribute more than his share to the expenses of Government, of supporting the helpless poor, or of maintaining in good repair the various roads of the kingdom.

There is yet another that stands in the very front rank of the most important politico-agricultural questions, and to this I will briefly allude—it is the importation of live stock from foreign countries, and the contagious diseases which such importation introduces from time to time into these islands. Mr. James Howard, of Bedford, in a paper on "Our Meat Supply," read before the Central Farmers' Club in February of last year, gives it as his opinion that these imported diseases have destroyed of our own cattle a higher money value than the sum-total of the whole of the cattle we have imported in the same period. This opinion is supported by Professor Gamgee, than whom there is no greater authority on the subject of diseases amongst animals. Now, admitting this statement to be even approximately true, what a strangely suicidal policy does it not reveal? If it were not a fact patent before our eyes, who would believe that the intelligence of this country would sit down quietly year after year with this monstrous piece of folly? Here we have the rinderpest again amongst us—again coming to us with imported cattle; shall we sit down any longer with this sort of thing? "Pleuro" and "foot-and-mouth" have, by being repeatedly imported, become almost naturalized to these islands. Presently rinderpest will be indigenous too. Our American cousins have demonstrated to us that they can send us fresh meat from the other side of the Atlantic, killed at the port of embarkation. Nothing less than this system must in future be permitted in the meat-trade from the Continent of Europe. All cattle and sheep must come to us as dead meat, and not as live animals. Their store stock we can do without. The English farmer has enough to contend with without foreign diseases being brought to afflict and destroy his sheep and cattle.

There are also questions, not at all of a political nature, and to which a political cure can hardly be expected to be applied, which also present ample room and scope for improvement. The chief among these is the way in which the great bulk of English farmers purchase their artificial manures and feedings. Mr. Snowball, a few months ago, at Cirencester, made some startling revelations as to the manner and extent to which farmers are being swindled in the artificial manures which are supplied to them by agents who attend country markets. It appears these agents receive a commission of 20s. per ton for their severe exertions in booking orders for manures which, not uncommonly, are intrinsically worth little more than half what the farmer has to pay for them. Now, here are men—going about seeking whom they may devour, I had almost said—having no capital, or next to none, of their own employed, and consequently running no risks, and yet contriving to make a profit out of the farmer of 15 to 25 per cent. on all the

transactions he is unwise enough to have with them; and the farmer himself, meanwhile, has to be content with a very much smaller profit on a risky capital employed, and on a year's operations. Passing strange all this, but so the facts stand recorded. When we come across these instances of impudent overcharge on the one part, and of placid submission on the other, thinking of the farmer we are tempted to exclaim—*O Sancta Simplicitas!*

Now, what is needed to accomplish not only the few salient political and commercial reforms I have specified, but also others which exist a little in the background? We all know how few of our Governments ever undertake any special kind of legislation until pressure of an earnest, powerful, and unmistakable sort is brought to bear; but when this is done legislation of the kind required quickly follows. This pressure, this expression of opinion, is, however, indispensable; and, indeed, they who ask timidly and fitfully scarcely merit what they ask, nor can they wonder at being refused their request. One great principle is essential to the success of a demand of this sort—the principle of unity. Without it the asking is commonly in vain. It therefore follows that if farmers must get their grievances redressed they must be united in their demands. And yet how seldom are they united as they ought to be! They seem to possess no genius in devising systems which would not only unite them but give expression to their unity. I am speaking now of English farmers. In December last Mr. Clare Sewell Read made a powerful speech before the Central Farmers' Club on the "Agricultural Labourer." In the course of that speech he declared that farmers ought to organize Defence Associations, so as to meet union with union. But he greatly feared that would not be done until many farmers were ruined. "You are like a rope of sand," said he, addressing the farmers of England. I commend to your notice these singularly powerful words: "You are like a rope of sand." Coming from Mr. Read, to whom none will deny the title of "farmers' friend," they are of great significance.

It would be scarcely becoming on my part to presume to dictate, or even to recommend, to the farmers of my country any special system of unity or organization. Others there are who are far more capable than I to do this, and I am well content to follow the lead of some one else. You have, however, kindly given me an opportunity of bringing under your notice an order in a distant country, which has done for the farmers there nearly all that the farmers of England require to have done for themselves here. It may be that the grange would not suit the tastes of Englishmen, and I do indeed think there are certain features in it which would not, but these features are not by any means a vital part of it. Be that as it may, however, it is beyond a doubt that English farmers need unity; and it is equally certain that they could, if properly organized, obtain everything they ought to receive. One prominent expression of such unity would, as a matter of course, take form in the sending of more of their own class to Parliament. When we come to think the matter quietly over, it is simply wonderful that the farmers of these islands should have been, as it would seem, content with only one or two members of their own class in the House; and our wonder deepens into sheer amazement when we consider with this the correlative fact, that they could if they choose send their own representatives for almost every county constituency in the kingdom! And I may venture to say that farmers, as a class are more truly represented by the borough members, whom they do not send, than they are by the county members whom they do send, to St. Stephen's. Commending this last statement to you as a fact of deep significance, I now bring my paper to a conclusion.

MESSRS. GIBBS AND CO. AND THE COLORADO BEETLE.—Messrs. James Gibbs and Co., the chemical manufacturers, have undertaken in this country, at their own expense, the work which in Austria and Germany has been taken up by the Government at the public cost. They have made and enclosed in neat caskets under glass, 10,000 models of the beetle in all its stages, and it is their intention to distribute them gratis to the farmers of the three kingdoms in the course of the current week. The distribution will commence at the Highland Society's Show in Edinburgh on Tuesday (to-morrow), and simultaneously caskets will be sent through the post from Messrs. Gibbs's office, Mark-lane, London.

REVIEW OF THE CORN TRADE,

FROM THE MARK LANE EXPRESS FOR THE WEEK ENDING JULY 28.

A marked depression took place in the temperature at the commencement of last week, and rain fell in abundance. The weather subsequently has been broken and showery, and the nights have been decidedly cold. Agricultural reports have consequently been less favourable as to the aspect of the cereal crops, whose progress towards maturity has been slow and unsatisfactory. Wheat appears to be a fair standing crop, but nothing more, and even with a speedy return of genial summer weather harvest will be ten days or a fortnight late. A certain amount of blight has, however, been observable, especially in white wheat, in some large wheat-growing districts in the home counties, and many of the ears are of an unhealthy colour, and badly filled. Barley and oats are poorly spoken of in almost all localities, and although no doubt somewhat benefited by the rains, the plants are uneven and thin on the ground, and do not promise an average yield. The greater part of this year's fine hay crop has been secured in good order, but in those districts where cutting has been late, the heavy rain of the past week has been too much for the farmers. In Scotland some severe storms of rain and hail have occurred, which have to some extent damaged the standing crops; still, as a rule, cereals promise fairly, and with increased warmth and sunshine will probably produce an average yield. Mangels also appear to give satisfaction, and although some few complaints have been heard about potatoes, the present appearance of this valuable esculent does not give rise to any alarm. The return of rain at this critical period of the cereal year has been productive of considerable animation throughout the grain trade, and the value of nearly all articles has tended upwards both at Mark Lane and in the provincial Exchanges. It is quite evident that both in England and France stocks of wheat in farmers' hands are surprisingly short; indeed, at the present moment they appear to be almost cleared out, and anything like an abundant supply cannot be looked for until after harvest. Prices have consequently advanced 2s. to 3s. per qr., and even at this improvement choice has been so restricted that millers have scarcely been able to satisfy their requirements, demand having exceeded supply in most of the principal markets. The consumptive wants of the country have, therefore had to be met out of foreign produce, for which a large sale has been experienced at fully 2s. per qr. advance. This activity of trade has taken place in face of continued heavy imports, both into London and Liverpool, and although some of the advance would probably be lost should favourable weather set in, appearances do not certainly indicate any marked decline for wheat this side of harvest. After that period the most important factors in the trade must be looked for in the quality and quantity of home-grown wheat yielded at harvest this year, and the probable outward movement to be expected from America. An important feature in the week's business has been the rise in the value of Maize in London and Liverpool. This seems to have been due to cable advices of smaller shipments from America, the stoppage of the Danube and Odessa supplies, and also to an increased consumptive demand; and although sales have been effected at an improvement of 1s. per qr., when the present relative values of wheat and maize are compared, 26s. 6d. per 480 lbs. for mixed American can hardly be regarded as other than a moderate figure. Barley has also sold more readily at improved quotations, but the

continuous stream of heavy supplies has prevented the oat trade from exhibiting any quotable advance. The sales of English wheat noted last week were 16,785 qrs., at 62s. 8d., against 21,567 qrs., at 48s. 5d. in the previous year. The London averages were 65s. 11d. on 929 qrs. The imports into the kingdom for the week ending July 14th. were 1,808,327 cwts. wheat, and 69,084 cwts. Flour. The market on Monday was largely attended, and the strength apparent in the trade at the close of the previous week was further increased by the rainy weather, quotations for almost all varieties of grain exhibiting an advance on those of the preceding week. The arrival of English wheat was only 829 qrs., and the few samples offering on factors' stands were readily sold at an improvement of 2s. per qr., as the demand was much in excess of the supply. The imports of foreign amounted to 53,911 qrs., to which quantity the principal contributions were 15,070 qrs. from North Russia, and about 26,500 qrs. from Persia and the East India. The arrivals from the United States were only 2,738 qrs., and the week's exports to 2,213 qrs. The choice of English being so much restricted, millers bought freely of foreign at 2s. per qr. more money, and the trade closed with some signs of a further improvement. The week's arrivals of barley consisted of 191 qrs. of home-grown, and 4,638 qrs. of foreign. An improved inquiry was experienced for this article, and grinding sorts were in good demand at an advance of 6d. to 1s. per qr. The imports of maize were 20,860 qrs., the bulk of the supply being from American Atlantic ports, and a considerable amount of business was done at an improvement of 1s. per qr. on the quotations of the previous Monday. There were 84,112 qrs. of oats reported, and, in spite of the continued heavy arrivals, a decidedly better trade was experienced at the extreme prices of the preceding week. On Wednesday no fresh arrival of English wheat was reported, but there were 49,810 qrs. of foreign. With rather brighter weather the market was somewhat flat, but wheat supported previous prices, while barley and maize were in fairly active request at an advance of 6d. per qr. on Monday's quotations. On Friday the return gave 150 qrs. of English wheat, and 73,190 qrs. of foreign. With fine weather the trade for wheat was quiet, but steady at Monday's prices. Maize, however, was the turn cheaper to sell. The imports of flour into the United Kingdom for the week ending July 14th, were 69,084 cwts., against 90,329 cwts. in the previous week. The receipts have been light, only 13,164 sacks being reported, and no barrels. Sales have been effected with greater facility, and the increased inquiry has caused values to advance fully 1s. per brl. and sack. The week's imports of beans were 53,976 cwts., and of peas 30,169 cwts., showing an increase on the former of 29,756 cwt., and a decrease on the latter of 8,058 cwts. There has been rather more business done in both articles at last week's extreme prices. The deliveries of malt were 16,065 qrs., and the exports 1,346 qrs. The trade has shown but little activity, but quotations have undergone no change. Business in agricultural seeds has shown some indications of renewed animation, the demand for field mustard and rape having been stimulated by the return of rainy weather. There has also been some speculative inquiry for yearling trefoil, and sales have been made at advanced prices, reports of the growing crop both at home and

abroad being still unsatisfactory. Clovers do not at present attract any attention, and there has been no business doing. Canary continues dull and neglected, the few transactions which have taken place having been quite on a retail scale. At the principal country markets held last week supplies of wheat were very small, and provincial trade ruled very steady at an advance of 1s. per qr. At Liverpool, on Tuesday, the market was well attended, and a large consumptive inquiry was experienced for all descriptions of wheat, at an improvement of 4d. to 6d. per cwt. on the week. Flour was also 1s. to 2s. per sack and barrel dearer, and maize, owing to reduced offerings ex-quay and cable advices of smaller shipments from America, advanced 2s. per qr., with a steady demand. Other sorts of feeding corn were steady, but unaltered in value. The week's imports were 124,000 qrs. of wheat, and 23,500 qrs. of maize. At Newcastle the wheat trade has ruled very firm, and prices have advanced 1s. to 2s. per qr. Feeding-stuffs have not varied, with the exception of maize, for which 6d. to 1s. more money has been paid, while flour has realised 1s. per sack and barrel advance. At Hull and Leeds wheat has improved 2s., and maize 1s. per qr., and the general tendency of prices for all articles has been against buyers. At Peterborough the limited offering of English wheat has realised an advance of 2s. to 3s. per qr. on the week, or nearly 5s. per qr. on the fortnight. At Edinburgh the supplies of grain from the farmers have been moderate, and a ready sale has been experienced for wheat at an improvement of 2s. to 3s. per qr. Millers raised the price of flour 1s. per sack, and oats were rather dearer, but no change took place in other articles. At Leith the weather has been very wet, and some of the crops on the low-lying lands have sustained injury by the overflowing of the rivers. The arrivals of wheat and flour from abroad have been large, and at Wednesday's market the trade ruled firm for both Scotch and foreign wheat, at an advance of 1s. to 2s. per qr. Flour was 1s. per sack dearer, and barley and oats also brought rather higher prices. At Glasgow the imports have been on a more moderate scale, and a fair business has been done in wheat and flour at an improvement of 1s. per qr. and sack respectively. At Dublin the weather continues showery, and the grain trade has manifested increased activity, both wheat and maize having advanced fully 1s. per qr. At Belfast the market has also been strong, and with a steady demand 6d. to 1s. per qr. more money has been paid for wheat, while maize has brought 1s. per qr. advance, and prices continue to present a hardening appearance.

The following are the reports from Mark-lane for the past four weeks:—

Monday, July 2.—The arrivals during the past week have been: English wheat, 1,439 qrs.; foreign, 58,108 qrs. Exports, 1,250 qrs. The supply of English wheat fresh up to market this morning was quite insignificant, and the trade ruled dull at last Monday's prices; of foreign the arrivals were again liberal, and, with a good attendance of millers, a steady consumptive demand was experienced at an occasional advance of 1s. per qr. on the week. Country flour, 7,955 sacks; foreign, 5,096 sacks and 2,000 barrels. There was but little business passing, and quotations remain unchanged. English barley, 209 qrs.; Irish, 13 qrs.; foreign, 8,252 qrs. Malting varieties unaltered; grinding sorts slow, and the turn cheaper to sell. Malt: English, 15,112 qrs.; Scotch, 806 qrs.; Irish, 400 qrs. Exports, 1,425 qrs. A quiet trade, at last week's currencies. Maize, 29,541 qrs. A slow sale for both round and flat corn, at a decline of 8d. per qr. on the week. English oats, 479 qrs.; foreign, 66,285 qrs. With continued liberal imports, business ruled inactive, and last week's currencies were barely supported. Eng-

lish Beans, 270 qrs.; foreign 6,458 qrs. A dull trade, at nominally late rates. Linseed, 10,228 qrs. Unaltered.

Monday, July 9.—The arrivals during the past week have been: English wheat, 1,141 qrs.; Scotch, 240; foreign, 74,076 qrs. Exports, 2,105 qrs. There was only a small supply of home-grown wheat at market this morning, which sold slowly at an advance of 1s. per qr. Of foreign the arrivals were again liberal, and with a large attendance of millers, an active demand was experienced, at a similar improvement. Country flour, 9,675 sacks; foreign, 4,394 sacks and 5,550 barrels. Country flour was 1s. per sack dearer, and for foreign there was a better demand, at fully late rates. English barley, 431 qrs.; Scotch, 25 qrs.; foreign, 14,213 qrs. In somewhat improved request, but still not active. Malting and grinding qualities were quite as dear as last Monday. Malt, English, 16,085 qrs.; Scotch, 1,059 qrs. Exports, 1,400 qrs. The trade was quiet, and quotations underwent no alteration. Maize, 36,792 qrs. An improved inquiry was experienced at an advance of 6d. per qr. on the week. English oats, 153 qrs.; foreign, 158,891 qrs. Business was quiet, and, under the pressure of unusually heavy supplies, all descriptions gave way 3d. to 6d. per qr. English beans, 230 qrs.; foreign, 1,180 qrs. A slow sale, at former currencies. Linseed, 5,009 qrs. No change.

Monday, July 16.—The arrivals during the past week have been:—English wheat, 829 qrs.; foreign, 53,911 qrs. Exports, 2,218 qrs. The supply of English wheat fresh up to market this morning was again very limited, and sales progressed steadily, at an advance of 2s. per qr. on the week. Of foreign the arrivals were liberal, and, with a large attendance of millers, an active demand was experienced, at a similar improvement. Country flour, 12,402 sacks; foreign, 762 sacks. The amount of business passing was not large, but quotations advanced 1s. per sack and barrel on the week. English barley, 180 qrs.; Irish, 11 qrs.; foreign, 4,638 qrs. Malting and grinding qualities were in rather better request, and prices improved 6d. to 1s. per qr. for both descriptions. English malt, 15,505 qrs.; Scotch, 560 qrs. Exports, 1,346 qrs. The trade ruled quiet, without quotable alteration. Maize, 20,860 qrs. In steady demand at an advance of 1s. per qr. on the week. Fine mixed American selling off stands at 26s. for 480lbs. ex ship. English oats, 254 qrs.; foreign, 84,112 qrs. With continued heavy arrivals there was a moderate inquiry at an advance of 3d. to 6d. per qr. from the recent lowest point. English beans, 533 qrs. A quiet trade at last week's prices. Linseed, 1,174 qrs. Rather firmer, but not notably dearer.

Monday, July 23.—The arrivals during the past week have been: English wheat, 1,297 qrs.; foreign, 73,687 qrs. Exports 5,904 qrs. At this morning's market the supply of English wheat was again exceedingly small, and sales progressed slowly at an advance of 1s. per qr. Of foreign the arrivals were liberal, and with a large attendance of millers a steady consumptive demand was experienced at the extreme prices of last Monday, all intervening depression being recovered. Country flour, 11,826 sacks; foreign, 2,346 sacks and 3,471 barrels. There was an improved demand for both sacks and barrels at fully late rates. English barley, 131 qrs.; foreign, 1,123 qrs. A steady trade at an advance of 1s. per qr. on grinding descriptions. Malt: English, 19,846 qrs.; Scotch, 235 qrs. Exports, 1,268 qrs. Business ruled quiet at former currencies. Maize, 21,049 qrs. Exports, 1,248 qrs. In active request at an improvement of 6d. to 1s. per qr. on the week. English oats, 548 qrs.; foreign, 128,383 qrs. Exports, 52 qrs. Fine qualities were 6d. to 1s. per qr. dearer, and inferior sorts also realised rather higher prices. English beans, 698 qrs.; foreign, 394 qrs. A quiet trade at unaltered quotations. Linseed, 885 qrs. Without alteration.

IMPERIAL AVERAGES

For the week ending July 31, 1877.

Wheat	21,781½ qrs.	63s. 01.
Barley	106 ..	32s. 51.
Oats	914 ..	28s. 01.

LONDON AVERAGES.

Wheat	929 qrs.	65s. 11d.
Barley	— ..	— 01.
Oats	— ..	— 0d.

COMPARATIVE AVERAGES.

WHEAT.			BARLEY.			OATS.		
Years.	Qrs.	s. d.	Qrs.	s. d.	Qrs.	s. d.	Qrs.	s. d.
1873 ...	25,359½	60 1	303½	36 0	590½	30 10		
1874 ...	20,851	60 5	97½	40 1	791½	29 8		
1875 ...	28,581½	47 5	44½	35 0	855½	29 0		
1876 ...	18,154	48 3	318½	30 11	736½	28 5		
1877 ...	31,781½	63 0	106	33 5	944	28 0		

AVERAGES

FOR THE SIX WEEKS ENDING					WHEAT.					BARLEY.					OATS.				
June 16, 1877	June 23, 1877	June 30, 1877	July 7, 1877	July 14, 1877	June 16, 1877	June 23, 1877	June 30, 1877	July 7, 1877	July 14, 1877	June 16, 1877	June 23, 1877	June 30, 1877	July 7, 1877	July 14, 1877	June 16, 1877	June 23, 1877	June 30, 1877	July 7, 1877	July 14, 1877
64s. 1d.	64s. 0d.	63s. 0d.	62s. 6d.	62s. 3d.	64s. 1d.	64s. 0d.	63s. 0d.	62s. 6d.	62s. 3d.	64s. 1d.	64s. 0d.	63s. 0d.	62s. 6d.	62s. 3d.	64s. 1d.	64s. 0d.	63s. 0d.	62s. 6d.	62s. 3d.
Aggregate Avg. of above.					62s. 9	62s. 9	62s. 9	62s. 9	62s. 9	62s. 9	62s. 9	62s. 9	62s. 9	62s. 9	62s. 9	62s. 9	62s. 9	62s. 9	62s. 9
The same period in 1876....					48s. 4	48s. 4	48s. 4	48s. 4	48s. 4	48s. 4	48s. 4	48s. 4	48s. 4	48s. 4	48s. 4	48s. 4	48s. 4	48s. 4	48s. 4

FLUCTUATIONS in the AVERAGE PRICE of WHEAT.

Prices.	June 16.	June 23.	June 30.	July 7.	July 14.	July 21.
64s. 1d.
64s. 0d.
63s. 0d.
62s. 6d.
62s. 3d.
61s. 6d.

FOREIGN GRAIN ENTERED FOR HOME CONSUMPTION DURING THE WEEK ENDING JULY 21.

Wheat	426981	Peas	23404
Barley	9405	Maize	53063
Oats	339005	Flour	18327
Beans	10635		

CORN IMPORTED AND EXPORTED FOR THE WEEK ENDING JULY 14.

	Imported into			Exported.	
	Engl'd.	Scotl'd.	Ireland.	British.	Foreign.
Wheat	1095326	108454	170047	230	4537
Barley	158787	23663	12396	261	...
Oats	313393	71061	...	592	...
Peas	36901	3396	...	143	...
Beans	34370	19708	...	...	173
Indian Corn	436755	55697	202967	...	15396
Buckwheat	1707	...	...	...	...
Total	1902339	269446	475830	1216	20086
Wheat Flour	51154	13685	4195	596	194
Oat Meal	3082	...	...	164	...
Rye Meal	676	...	...	...	...
Ind. Corn Meal .....	...	...	...	...	...
Total	54911	13685	4195	760	196
Grand Total	8047390	803133	479624	1976	20282
Malts .....	...	...	...	1518	...

CURRENT PRICES OF BRITISH GRAIN AND FLOUR IN MARK LANE.

		Shillings per Quarter	
WHEAT, Essex & Kent, white.....	old — to — new	64 to 69	
	red	63 67	
Norfolk, Lincoln., and Yorksh. red old — new		60 64	
BARLEY	Chevalier new.....	47 55	
Grinding	36 to 39.....	Distilling	34 87
MALT, pale.....	new, 66 73.....	old 60s.....	brown 53 55
RYE			40 48
OATS, English, feed 25 to 30		Potato	—
Scotch, feed.....		Potato	—
Irish, feed, white.....		Potato	—
Ditto, black.....	36 28	Potato	—

BEANS, Masagan	30 34	Ticks	35 49
Harrow	—	Pigeon, old 41	50
PEAS, white boilers 36 40	Maple 38 to 42.....	Grey 33	34
FLOUR, per sack of 280lbs., best town households		61	54
Best country households, old.....		48	51
Norfolk and Suffolk, old		44	46

FOREIGN GRAIN.

		Shillings per Quarter	
WHEAT, Dantzic, mixed	65 to 67.....	extra.....	— to 69
Konigsberg	65 66	extra.....	— 69
Rostock	65 66	old.....	—
Silesian, red	—	white.....	—
Pomera., Meckberg., and Uotermark.....	red	64	67
Ghirka 65 to 81	Russian, hard, 56 to 58, Saxonska	58	61
Danish and Holstein, red	red American	60	65
Chilian, white 63	Californian	68	63
BARLEY, grinding 26 to 27.....	distilling	39	43
OATS, Dutch, brewing and Poland 24 to 26.....	feed 25	26	
Danish and Swedish, feed 24 to 26.....	Stralsund	26	27
Canada 24 to 26.....	Riga 18 to 19.....	Petersburg	17 24
TARPS, Spring			40 48
BEANS, Friesland and Holstein			—
Italian	31 to 33.....	Egyptian	30 32
PEAS, feeding and maple.....	36 38	fine boilers	39 40
MAIZE, white	27 29,	yellow	26 29
FLOUR, per sack, French 60 53	Spanish, p. sack	46	49
American, per bri.	27 29.....	extra and dble.	30 31

BRITISH SEEDS.

Mustard, per bush, brown 13s. to 16s., white.....	13s. to 16s.		
Canary, per qr.	new 58s. to 59s., fine.....	59s.	64s.
Cloverseed, fine red and dark purple 90s., com.....		65s.	70s.
Coriander, per cwt.		22s.	24s.
Tares, winter, new, per bushel.....		6s.	7s.
Trefoil, new.....		26s.	28s.
Ryegrass, per qr.		28s.	30s.
Linseed, per qr.	sowing 60s. to 68s., crushing	63s.	64s.
Linseed Cakes, per ton	£10 10s. to £11	10s.	11s.
Rapeseed, per qr.	new.....	84s.	86s.
Rape Cake, per ton	£5 10s. to £5 12s.	12s.	13s.

FOREIGN SEEDS.

Coriander, per cwt.		24s. to 26s.	
Cloverseed, red 64s. to 74s., white	69s.	60s.	
Hempseed, small 36s. to 38s., per qr.	Dutch	42s.	44s.
Trefoil		22s.	24s.
Ryegrass, per cwt.		28s.	30s.
Linseed, per qr.	Baltic 53s. to 55s., Bombay	54s.	56s.
Linseed Cakes, per ton	£10 10s. to £11	10s.	11s.
Rape Cake, per ton	£5 10s. to £5 12s.	12s.	13s.
Rapeseed, Calcutta		54s.	56s.
Caraway		40s.	42s.

Cobent Garden Market.

LONDON, THURSDAY, JULY 19.

Cherries are still arriving in bad condition, and are only cleared at very low prices. Currants have improved, and Raspberries continue to make ready sales at high rates. Owing to the London season being nearly over, the demand for high-class fruits has considerably decreased, and we may now look forward to a steady fall in such goods as Peaches, Grapes, Melons, &c.

FRUIT.

		s. d.		s. d.		s. d.	
Apricots per box
Apples, ½ half-sieve
Cherries ½ half-sieve
Cobs, per ½
Grapes, ½ lb.
Lemons, ½ hundred
Melons each

VEGETABLES.

Artichokes, per bus. ....	...	...	...	...	...	...	...
Eng. Globe, doz. ....	...	...	...	...	...	...	...
Beans, Fr., new, ½ 100 .....	...	...	...	...	...	...	...
Beet, per dozen .....	...	...	...	...	...	...	...
Cabbages, per dozen .....	...	...	...	...	...	...	...
Carrots, ½ bunch .....	...	...	...	...	...	...	...
New French, per b .....	...	...	...	...	...	...	...
Qualiflowers, per doz. ....	...	...	...	...	...	...	...
Celery, ½ bundle .....	...	...	...	...	...	...	...
Chilies, green, per 100 .....	...	...	...	...	...	...	...
Cucumbers, each .....	...	...	...	...	...	...	...
Endive, per doz. ....	...	...	...	...	...	...	...
Escarol, per doz. ....	...	...	...	...	...	...	...
Garlic, per lb. ....	...	...	...	...	...	...	...
Gooseberries, ½ qt. ....	...	...	...	...	...	...	...
Herbs, per bunch .....	...	...	...	...	...	...	...
Some Radish, ½ bush. ....	...	...	...	...	...	...	...
Leeks, per bunch .....	...	...	...	...	...	...	...
Lettuces, Co. per doz. ....	...	...	...	...	...	...	...
English, score .....	...	...	...	...	...	...	...
Mint, grn., per bunch .....	...	...	...	...	...	...	...
Mushrooms, ½ pottle .....	...	...	...	...	...	...	...
Onions, ½ 10 bunches .....	...	...	...	...	...	...	...
Young, ½ bundle .....	...	...	...	...	...	...	...
Parley, per bunch .....	...	...	...	...	...	...	...
Peas, green, per bush .....	...	...	...	...	...	...	...
Shallots, per quart .....	...	...	...	...	...	...	...
Potatoes, new, per lb. ....	...	...	...	...	...	...	...
Radishes, per bunch .....	...	...	...	...	...	...	...
Spanish per doz. ....	...	...	...	...	...	...	...
New Jersey, per doz. ....	...	...	...	...	...	...	...
Rhubarb, ½ bundle .....	...	...	...	...	...	...	...
Salads, ½ bundle .....	...	...	...	...	...	...	...
Shallots, ½ lb. ....	...	...	...	...	...	...	...
Spinach per bushel
Tomatoes, ½ doz.
Turnips, ½ bus.
new, per bundle
Veg. Marrows, each

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THE FARMER'S MAGAZINE.

SEPTEMBER, 1877.

PLATE.

ROSSINGTON,

THE PROPERTY OF T. HARVEY D. BAYLY, Esq., EDWINSTOWE HOUSE, OLLERTON.

Rossington is a light bay gelding by Cain, out of a Canute mare, and a very nice looking fifteen stone hunter, showing plenty of breed on good short limbs, which he brings well under him when galloping. He is one of the best looking of the many Edwinstowe nags which have been exhibited, a hobby which must cost his worthy owner a good round sum annually in purchasing horses of that form which, in his judgment, will win the approba-

tion of the triumvirate in a show-ring. Rossington has only appeared in the arena seven times, and has won the following hunter's prizes:—The second at Alexandra-park, and at the Royal Agricultural Show at Birmingham, in 1876; the first at Manchester; the third at Islington; the first light weight, and the first heavy weight at Alexandra-park; and the first at Peterborough, in 1877.

OUR FOOD SUPPLIES.

In accordance with an Order of the House of Commons in March last, the British Consular Representatives in Europe, North Africa, the United States, Brazil, and the River Plate have forwarded statistical information as to the number of cattle and sheep in their several consulates, and their views on the capabilities of these localities to supplement the food supplies of Great Britain. On the whole it cannot be said that we are in the possession of much information from this Government return. All the facts were pretty well known before, though this is the first time public attention has been officially called to them. Yet there are some interesting features in the reports to which we shall call especial attention.

Taking Europe first, and beginning nearest home, we find that France is, at present, scarcely able to supply herself with animal food, and that we certainly cannot look to her for any appreciable addition to our own meat supplies. Prior to the Franco-German war we received a considerable number of very excellent animals from France, coming chiefly to the port of Southampton; but the trade has almost entirely fallen off. At the present time the price of meat is higher in Paris and the other principal towns in France than in London and corresponding country districts in England. Although the several accounts show that the number of live stock is now as great as it was before the war, there does not appear to be an excess of supply over demand which would enable any considerable exportation to be carried on. In the Bordeaux

district the statistics show that the number of live stock does not sensibly increase, although there is abundant room for greater production. The farm holdings are small, averaging under 24 acres of arable and meadow land throughout France, and, even with the uncultivated land, they would not average 30 acres; whilst in the Bordeaux district they are smaller still, averaging under 18 acres, or about 25 acres, including waste lands. From this circumstance the Consul fairly argues that these small farmers are deficient both in the capital and the enterprise necessary for the creation of an export cattle trade, and that their energies are even now taxed to supply local wants.

The annual consumption of animal food in France is estimated to be equal to about 38 per cent. of the home stock, and 24 per cent. of the sheep. In 1875 France imported 1,428,537 head of stock, and exported 190,519 head, and in the Bordeaux district the importation was six times as great as the exportation in respect of cattle, and twenty times as great in respect of sheep and lambs. From Cherbourg we receive eggs, butter, and pigs, but few cattle. From Havre we get a few cattle, but, as the Consul remarks, considering the high price of meat in that town it is strange that any cattle should be exported. From Calais there are only occasionally a few animals exported. Marseilles is an importing district, cattle being sent to that market from Sardinia and Algeria. The Consul reports that a ship is being fitted up with a refrigerating apparatus to trade between the

River Plate and Marseilles with dead meat. In Brittany there appears to be a considerable production of stock, which is in excess of the local consumption. Part of this might become available for the English market in the shape of dead meat, if English capital and English industry be directed to it, but not unless. The last official returns showed the total number of horned cattle of all ages in France to be 11,721,459, sheep 25,935,114, pigs 5,755,656, and goats 1,794,837.

Taking France as a whole, then, she must be regarded as an importing rather than an exporting country in the matter of animal food. Meat is dearer in France than in England, and although the climate is favourable to agricultural improvement, and, notwithstanding there are undeveloped resources, there is a want of the capital and enterprise which are requisite for an export cattle trade.

The returns from Denmark show that the cattle on the mainland (Jutland) are principally reared for consumption as meat, whereas those on the islands are chiefly dairy stock. The Consul gives prominence to the efforts made both publicly and privately, to conform to the conditions of the English market, the harbour of Esbjerg having been built at a great expense with the sole view of developing the cattle trade between that port and England. He points out that the restrictions imposed from time to time by the English Government have a prejudicial effect on the cattle trade of Denmark, and that, as a result, dairying is becoming more prevalent on the mainland, and so far displacing the cattle-rearing industry; he tells us, too, that the "export of fresh meat has at no period shown itself to be a paying speculation, and no trade in the article is now carried on; thus all the public and private arrangements and regulations made have only had the live cattle trade in view." This is significant. The Consul appears to have in his mind the welfare of Denmark, and between the lines one may read, "What will become of us if you prohibit live stock importation to England?" That is not our business; England must take care of herself, and Denmark will have to do the same. If the export of fresh meat has not been made profitable there, it has elsewhere. Danish exports are chiefly to Germany (Schleswig-Holstein) and Great Britain. In 1875 we took 50,200 horned stock, and 55,200 sheep, and there were also exported to Schleswig-Holstein 45,400 horned cattle and 14,500 sheep. The trade with Great Britain has been steadily increasing, whilst that with Germany has remained nearly stationary. The number of horned stock in the country is said to have doubled itself every second year since 1869, and in 1875 the number of sheep was four times greater than in the preceding year. In 1871 the total number of horned stock, including calves, was 1,238,898, and of sheep and lambs 1,842,481. The export trade of the Netherlands is carried on chiefly from the ports of Rotterdam, Harlingen, and Nieuwediep, in British steamers. In 1874 there were 16,570 bulls, 926,788 milch cows, 19,965 calves, 66,101 oxen and cows for

slaughter, and 10,853 draught oxen, together 1,469,077 head of horned stock. In the same year the sheep numbered 936,429, and the pigs 352,369. The exports of live stock to Great Britain in 1875 were 42,520 bulls, cows, and oxen, 38,935 calves, 406,881 sheep, 1,696 lambs, and 39,844 pigs.

Germany is the chief cattle-exporting country of Europe. The breeding and rearing of cattle is carried on principally in Baden, Wurtemberg, Bavaria, and Hesse. In 1873 the total number of horned cattle of all ages was 15,776,702; sheep and lambs, 24,999,406; pigs, 7,124,088; and goats, 2,320,000. On the whole, it appears that Germany is increasing her production of animal food, and the quality of her cattle especially is being improved by the use of English sires. The sheep-breeding industry is not so satisfactory throughout the country; but in certain districts great attention is paid to the breeding of animals suitable to the English market. There is no doubt that Germany possesses resources from which a large supply of meat could be sent to Great Britain; and whilst, as is the case with Denmark, the whole export trade is in the shape of living cattle (with the exception of a small quantity of fresh meat from Hamburg), there is no reason but that of the cost and inconvenience of altering existing arrangements why we should not take all the beef and mutton Germany has to spare. Mr. Ward, the British Consul at Bremerhaven, alludes to the great dissatisfaction expressed by the cattle-owners in his district at the restrictions placed on the export trade by the Privy Council, which are, they say, "prejudicial to their interests." No doubt they are; they were not made in the interests of the German cattle trade, but ostensibly in the interests of the British public. To solicit the British Privy Council to relax or remove these restrictions because they do not conduce to the prosperity of German cattle breeders and exporters is an utter absurdity. But Mr. Ward very justly points out that, notwithstanding the utmost caution, diseases do come to England, *via* Germany, and therefore the interests of British cattle-owners will still be exposed to risk so long as the traffic in living animals continues; and not only the British cattle-owners but the British public as well will be sufferers. Mr. Ward calls attention to the fact of Russian and Hungarian cattle being mixed up with the German stock exported to Great Britain. He says:—"The very short time which, owing to improved railway communication, is, as a rule, now occupied in the transit journey of such animals through Germany from their native districts (frequently mere hot-beds for Cattle Plague and minor diseases) renders it impossible for even the most experienced veterinary authorities to discover at all times, with infallible certainty, traces of disease amongst such beasts." In like manner Consul Herstlet, speaking of the cattle-trade of the Konigsberg district of Prussia, says:—"In Russia the Rinderpest is always in existence in some part or other of these extensive dominions. Formerly, before the existence of railways, it was natural"

impossible to get infected cattle to walk the enormous distance; but now cattle can be brought by unscrupulous persons near to the borders, and then smuggled into Germany." Thus it will be seen that Germany, in spite of her utmost precautions, constantly receives cattle diseases from Russia, and becomes a source of infection to other European countries. A glance at the map of Europe will show the narrow sea-board along which the German cattle must be concentrated before export to Great Britain, and when it is considered that cattle from all parts of Germany go not only to the Weser ports—Bremerhaven, Geestemunde, and Nordenhamm—but also to Hamburg, it is not difficult to see the danger to which we are exposed from the importation of German cattle. It has previously been shown that a very large proportion of the Danish beasts go to Schleswig-Holstein, and these no doubt come to us *via* Tønning, as Schleswig-Holstein is a cattle exporting country, and Tønning is the chief port from which the trade is carried on. Schleswig-Holstein is, therefore, reckoned as safe as Denmark; but there is nothing to show that German cattle from all sources do not find their way to Tønning as well as to Hamburg, and in that case the proposed exemption of Schleswig-Holstein from the general prohibition to be put on Germany would simply result in making Tønning the outlet for all Germany. It is very clear that slaughter at the ports of debarkation will not suffice to keep infection from our shores; and as we have had painful experience of the impossibility of keeping imported diseases within the defined parts of ports, such a half-measure will probably soon show its inefficacy. Consul Annesley states that the exports from Schleswig (Tønning and Husum) consist almost entirely of cattle reared in the province; but he does not tell us what becomes of the large importations from Denmark. On the other hand, he admits that those exported from Hamburg are derived from "some of the most remote parts of Germany." Notwithstanding the restrictions, the exports of sheep from Germany are largely increasing.

Austria is constantly infected with Cattle Plague from Russia and Poland. In the absence of statistical information of any kind since 1869, Consul Nathan can do little more than point out the fact of Austria not possessing sufficient cattle for its own consumption; nevertheless there does actually exist a small export trade consisting of richly-fed oxen which are bought by dealers from the breweries of Silesia, Moravia, and Bohemia, and sent to England, *via* Hamburg and Geestemunde. From this will be seen the danger lurking in these German ports. Austria appears to have undeveloped resources; but she cannot, at present, be reckoned on to contribute any appreciable supply to Great Britain. Southern Russia may utilise her cattle production in the next generation perhaps. Turkey has enough to do to feed herself, and the quality of her cattle is not such as would ensure them a market in England. With the finest climate and most productive soil, perhaps, in the world, Turkey is

little better than a wilderness. The cattle of Norway and Sweden are too small for English markets. Spain has every facility for sending us cattle. All she wants is capital, energy, and a few such enthusiasts as Vice-Consul Maroh, who is anxious to go into the trade at once. He thinks he knows how to go to work now—having made a little mistake some time ago—and "respectfully suggests" that he should be empowered to make a little purchase straight off, say to the extent of 5,000 or 10,000 head of cattle, as a commencement. As for dead meat, it could be sent, he says, in any quantities, without refrigeration, if the ships were only fast enough! If this gentleman remains at Santander, and receives the encouragement he deserves, the hungry may soon expect to be filled with good things. Spain has to thank her natural boundary of mountains for her immunity from cattle diseases of the more virulent type. We may look to Spain for future supplies. Italy consumes her own produce, with the exception of a small export trade with France.

North Africa may come into the field some day. Her resources are good; but the semi-barbarism of many of the States—Morocco to wit—does not admit of cattle traffic, and at present exports are prohibited. Brazil, being in its infancy, has not yet begun to grow cattle beyond its own wants; and these have to be supplemented with "charque," or jerked beef, from the Argentine Republic. The future of the cattle or meat traffic of the Argentine Republic no one can foresee. The recent importation of fresh meat from Buenos Ayres in the *Frigorifique*, opens up a wide field of speculative industry. The resources of the La Plata States are vast and undeveloped; and, now that we can get supplies from beyond the tropics, the meat-producing capabilities of Europe fade into insignificance. The United States of America have almost inexhaustible resources, which are now being turned to account in the English market. Last week we gave an extract from this Report in especial reference to the development of the export trade in fresh meat from the States, showing the success of the industry, and the prospects of the supplies being largely increased. With 28,074,582 head of horned stock and 28,477,951 sheep at the last census (1870), a spirit of enterprise which finds the world almost too small for its scope, plenty of capital, and an undeveloped country, our American cousins are not likely to let us want meat so long as we have money to pay for it.

In recapitulation, we find that Spain (and Portugal, although not mentioned in the Report), Germany, Denmark, and the Netherlands have cattle to send us. They have been in the habit of sending them alive, and are loud in their protest against a change of custom. But there is nothing, except the want of capital and enterprise, to prevent them sending us their surplus produce in the shape of dead meat; and it will be better for them to be put to the inconvenience of finding such capital and energy as may be requisite than for us to be exposed to losses from their cattle diseases. With the

United States and Canada on the one hand, and South America on the other, not forgetting Australia in the background, it will probably soon be a matter of comparative indifference to us whether Europe can send us cattle or not; and certainly we need take no notice of threats to divert the existing supplies to other channels. As long as we are the best customers of European meat-producers, they are not likely to let an alteration in the system of traffic prevent them from sending us what we require, and can pay for.

THE TRIAL OF SELF-BINDING REAPERS.

The work of these novel machines was so satisfactory—considering it was the first public experiment of the kind that has been tried in this country—that we believe it will soon be shown that the cost of it will be the best laid out money the Royal Agricultural Society of England has ever expended.

The cutting took place on the farm of Mr. Sootson, near Liverpool, on August 16th and 17th. Previous to the recent Show of the Royal Agricultural Society, held in Liverpool, the gold medal of the Society was offered for “an efficient sheaf-binding machine, either attached to a reaper or otherwise,” and out of this offer arose the present trial. Originally there were entered for competition machines belonging to eight exhibitors at the Liverpool meeting, viz.:—Messrs. Burgess and Key, of London; Messrs. J. and F. Howard, of Bedford; Messrs. Phillips and Co., of Grantham; Mr. M. F. Neale, of London; Mr. Walter A. Wood, of London; Messrs. D. M. Osborne and Co., of Liverpool; Mr. H. J. H. King, of Stroad; and Mr. Chymys H. McCormick, of Chicago, U.S.A. The first three of these firms did not send their machines for exhibition to Liverpool, and the only two machines shown here by which the binding process is performed with string or yarn were withdrawn from competition, leaving but three machines, all of which are constructed for binding with wire, to be submitted to trial.

We cannot enter at length on this occasion into the mechanical details of these machines. Indeed, it is next to an impossibility to write an intelligible description of them unless illustrative diagrams be at the same time given. But with regard to the work done we may say that we were agreeably surprised at the near approach to really good practical cutting and tying which was turned off. Here, too, we cannot enter minutely into details to-day, as the wet prevented more than half-a-day's work being done on Thursday, and therefore the judges could not be expected to get through their final trials and settle their awards till late on Friday. While, however, we prefer to defer our full description and discussion of the several points that arose during the meeting, we are pleased that we can give our readers the official announcement of the Judge's and the Secretary's statement, that the recommendation of the Judges has been adopted by the Stewards.

The work was begun and continued under the following regulations:—

1. The Exhibitors will draw lots for the half-acre plots.
2. They will set their machines at such height and make such sheaves as they consider will enable them to work at the best advantage.
3. They will be allowed one leader for the horses and one man to attend the machine besides the driver, that is to say, three men in all.

As a summary of the work done, we may say Mr. McCormick, who drew lot 1, cut his corn well, but as the wheat was too green it was difficult to get it on to the platform, particularly as the proportions of the machine

were more adapted for light American crops, and where the stubble is cut nine inches to a foot high, than for English crops, the stubble of which is required to be cut close. The divider was too short in front, and too high behind; therefore when the ears lay across the divider, as they did going down the hill, the straw bent, and the heads hung over the divider till they were driven to a full-sized sheaf, when this excessive accumulation was thrust upon the endless webbing for carrying it to the binder, the result being a frequent block. The binder proper, therefore, did not have a fair chance here. But, considering all things, the work was well done, and the causes of the defects on this occasion may be easily obviated in the future. From the numerous blocks it took 59 min. to do the half-acre.

Mr. Wood cut his half-acre in an excellent manner in forty-five minutes. His machine was, however, stopped four times at a loss of eight and a half minutes, from the straw being too green and harsh to work properly; there was no fault of the divider in this case, however, as Mr. Wood has had too much experience of English crops to make a mistake of this kind.

Mr. Osborne's machine is defective in the binding and clearing arrangements, so the sheaves were mixed together at the heads and butts, and hung one to the other till four or five were being dragged, when the weight of them pulled the two nearer the platform apart.

In the standing oats Mr. McCormick and Mr. Wood did as good work as could possibly have been done by hand; Mr. Osborne's machine, however, failed entirely here in the binding, as we have explained it did in the wheat. But these points we will further explain next week.

The following is the official announcement to which we have referred above:

Royal Agricultural Society of England. Trial of Automatic Sheaf-binding Machinery, Liverpool, August 17, 1877.

The Judges report that having made a careful and thorough examination of the American sheaf-binding machines, which were tried on wheat and oats on Mr. Sootson's farm at Aigburth, they are of opinion that whilst great credit is due to the three inventions, viz., those of Walter A. Wood, D. M. Osborne and Co., and C. M. McCormick, for the considerable efficiency attained, neither of them have, as regards the requirements of English farmers, attained that perfection which would justify them in awarding the Gold Medal of the Society. They, however, strongly recommend that a Silver Medal be awarded to Walter A. Wood as a recognition of progress, and that High Commendation be bestowed on the binding mechanism employed by D. M. Osborne and Co.

Believing in the great importance of this invention, when made practically efficient, they were glad to know that the Society proposes to continue their offer of a Gold Medal for an efficient self-binder.

(Signed)

HENRY CANTRELL.
JOHN COLEMAN.

The recommendation of the Judges has been adopted by the Stewards.

H. M. JENKINS, Secretary.

“SCIENTIFIC” EXPERIMENTS.—The absurdities of the scientific world are rather beyond a joke. One enthusiast for acclimatization introduced rabbits into Australia, where they have since become a nuisance of the gravest kind. Another threw a plant of the *Anacharis* into a Cambridge watercourse, from which it has spread half over England, and entails the necessity of spending many thousands of pounds every year for its extirpation. But the wickedest thing of this kind has been done by an enterprising Yankee from Texas, named Snowie, and an English friend who lives near Manchester. Mr. Snowie provided himself with a hundred Colorado beetles, whose habits he carefully observed. These he presented to his friend, who has put them into his garden, and intends making observations on their feeding, mode of life, and so forth. I do not think the word “atrocity” is in this case at all too strong.—*Tatler*.

AGRICULTURAL SOCIETIES.

HEREFORD.

"Well, what sort of a show?" we ask an official as we entered. "Very good, bar the rain" is the reply, and such, on inspection, we find it. The elements are no doubt superfluously spiteful, considering the rarity of the labourers' holiday, and the amount of corn that the unfortunate farmer has been tempted by the late hot days to cut down. However, there's no help for it, and although in the late afternoon the paths get to be one line of slush, for the present we move pleasantly over sward in a well-ordered yard. The machinery we have little time to dwell on, and fortunately the Hereford cattle, the speciality as one would expect of the exhibition, are close at hand. If their reputation depended on this Show, it would scarcely be as high as it is. At least we may say so of the first class on the list, the "bull, cow, and offspring" lot. In entry number one, Mr. Lewis's Little Bill is a long animal, old-fashioned, both in hue, and character, such as we find delineated as the frontispiece of the older magazines, some fifty years ago. His partner was considerably lighter in hue than himself. The dark as a rule admire the light, and *vice versa*. To this lot the second prize was adjudged. Mr. Price's Truro (No. 2) is a meaty useful beast, got by the famous Horace. This lot had reserve number. In the third prize assortment we found a warning not to breed from an animal having a palpable defect, for the calf, as its sire was badly high at the tail. Both sire and dam were cow-hocked, and close behind as Welsh hillside ponies. They have been possibly tied up too much on a sloping floor. It was thus that the defect arose in the last stock at Kewley. This lot had capital flesh, and plenty of it. They stood, unfortunately, near to Tredegar, so gentle and unpretending despite the ears nailed in gay patch work before him indicate. Grand and symmetrical as he is, he begins to give way. Over the crops he was always a little weak, and now the weight of his "breeches" has begun to take from the plumpness of his middle round, as is the case also with the renowned Devon, "The O'ny Jones." He is otherwise a most evenly turned bull, and has a great depth of juicy meat over his compact frame. His partner, Beauty, is a good cow, but the calf scarcely as promising as either parent yet; they are, however, a very distinguished trio. Next to them a dark bull, Capid, is licking the head of and apparently cheering under their defeat his golden-yellow partner. Tredegar and his bride are in unfortunate proximity. Amongst the bull calves Mr. Carwardine wins with Anxiety, a deep-bodied thick youngster of rare touch and quality, but not so truly modelled over as we could wish, and he sinks in his back a little. Oswald, the second prize holder, is flatish in the rib. This was not a taking class; in fact, being all as nearly as possible a year old, they had lost their infantine beauty, and are in the out-at-elbows lot. The yearling bull class includes some capital stock. Mrs. Sarah Edwards's Victor was in some respects a perfect wonder. He had magnificent rounds and loin. His flank is about the heaviest for his age we ever felt. His head is placidish, the horns being set back unusually far, and he straddles curiously wide with his fore-legs; this arises, it was said, from his being used too early. Mr. Carwardine's Ben Battle is excellent over the crops, and has the look of growing into a fine bull. He won second prize, but there were those who preferred to him Mr. Platt's Poet. The Rev. A. Clive's Devereux pos-

sesses all the mellow quality of that well-known herd, but is high at the tail. The same breeder shows a very lump of meat in the two-year-old Kentchurch, by Tredegar. This sire was wisely chosen to meet the requirements of Mr. Clive's cows, which have much character and an old-fashioned uniform type, but want smoothing-over, the very thing Tredegar is adapted to do for them. It is worthy of mention that this eminent bull descends from stock that belonged to the active, enthusiastic, Hereford Herd Book editor, Mr. Duckham. For the excellence of the heifers Mrs. Edwards's entries, Leonora and Beatrice, sufficiently testify. Then the prizes for the best cow in-milk, first and second go to the grand pair, Rosebud and Helena, whose respective beauties have been so often described. Rosebud has as beautiful a front as can be imagined, though some take exception slightly to her horns. The steers are kindly and good throughout. The class of four breeding cows includes a fine lot of Mr. Tudge's, well fed up for show, Mr. Clive's second prize assortment not having been as much favoured apparently, unless naturally on a smaller scale than the winners. Amongst the Shorthorns Mr. Stratton reigns almost supreme. His bull calf, Pandemonium, has a rare level back; a little more spring of rib, and a slight improvement in his ramp would make him hard to beat. The old bulls are one and all very indifferent, after Dursley. There is a good but small show of pigs, Mr. Wheeler sweeping the decks, in black and white breeds, with professional travelling advertisements whom it is hopeless for the ordinary breeder to meet. The Jersey cows, first and second, both bred in the Island, were charming specimens of the sort. The prize Cotswold sheep are good, as might be predicted when Mr. Swanwick entered the lists as an exhibitor. There is a large entry of Shropshires, but nothing in the ram line so good as the winning yearling at the West Midland Show. Mr. Bailey shows a capital Oxford Down ram, and Mr. Waller a Southdown, excellent over the back and at the rump, where general improvement in Down flocks is so much required. In these respects he was unquestionably superior. Time was when Hereford horses were in great request, and it seems likely to be the case again. The cart sires that won were not big as we saw at Liverpool, but better adapted to the plough, and very shapely. Mr. Platt's second prize cart mare has top lines of beauty; would that she were but evenly proportioned all over. Mr. Davies's well-known General is first prize agricultural stallion; nothing can live with him in his walk. Major Peplow's brown hunter brood mare was a very fine animal; this gentleman showed also a marvel of a weight-carrier. Colonel Heywood's grey up to 14 stone is very neat and workmanlike. In fact, there was a large collection of very excellent horses on the ground, and the jumping prizes were well contended for in a spacious ring, some horses performing admirably. The poultry were well arranged, and open without extra charge to the visitor. In fact, we congratulate the county of Hereford upon a most creditable show, from every point of view. There was great excitement over the leaping of the Galloways, not exceeding fifteen hands, a bay of Mr. Hills, of Hereford, Little Charlie, who has often under like circumstances been credited with first honours, clearing the goosed hurdles at speed in the neatest way. The horse that attracted most attention, however, was an ordinary looking four-year-old of Mr. Farmer's, who at first sight went lolloping along, but who was soon found to cover the ground well and to leap in the easiest, most

thorough way imaginable, as though his deserved success were really a matter of the most utter indifference to him. Mr. Hope Barton's bay mare, Brenda, was of excellent character as a hunter, up to 13 stone, and Mr. Platt's Pickpocket, in the same class, very neat. Mr. Morris's chestnut mare, Kate, dam by Ancient Briton, showed decided traces of Welsh pony blood, and looked as if she could fence and gallop for ever under eleven stone. Mr. Phillpott's Nimrod, by Christmas Carol, dam by Little Tommy (famous in Herefordshire a generation since), was full of strength and quality; his head was, heavy, however, to our taste. Mr. Bailey's Precocity scored another victory. His brown filly, The Witch, exhibits much promise, having the flattest and strongest of legs. Hence we adjourned to the "Yankee notions" stall, where, having invested in a shilling glass-cutter that is to supersede the diamond, our first performance is to sup upon with it to eat our stick.

PRIZE LIST.

JUDGES.—CATTLE (Hereford): Mr. George Pitt, Chadnor Court, Dilwyn; Mr. J. W. James, Mappowder, Dorset. **SHORTHORNS AND CHANNEL ISLAND:** Mr. P. Morris, Measowr, Gloucester; Mr. R. J. Newton, Campsfield, Oxfordshire. **SHEEP:** Mr. Robert Garul, Aldworth, Northleach; Mr. C. R. Keeling, Conzeve, Penkridge, Stafford; Mr. J. Treadwell, Upper Winchendon, Aylesbury. **PIGS:** Mr. P. Morris, Measowr; and Mr. R. J. Newton, Campsfield, Woodstock. **HORSES:** Hunters and roadsters: Col. Luttrell, Badgworth Court, Axbridge; and Captain Freke Lewis, Abbeydore Court. **Agricultural:** Mr. W. Allen, Hartpury, Gloucester; Mr. John Marton, of Wilberley.

CHAMPION PRIZES.

Prize of £25 for the best bull exhibited in any of the classes of the Hereford breed, W. Taylor (Tredgar).

Prize of £15 for the best cow or heifer, in any of the classes of the Hereford breed, Mrs. S. Edwards (Leonora).

Prize of £10 for the best ram in any of the classes.—R. Swanwick, Royal Agricultural College, Cirencester.

Prize of £10 for the best pen or lot of ewes, in any of the classes.—J. E. Farmer, Felton, Ladbrow.

CATTLE.

HEREFORDS.

Ball, cow, and their offspring.—First prize, £10, W. Taylor, Showle Court, Ledbury (Tredgar); second, £7, E. J. Lewis, Brienton, Hereford (Little Bull); third, £3, T. Middleton, Lynaven, Clun, Salop (Baron 4th). Reserve number, J. Price, Pembroke (Truro).

Bull not exceeding one year old on the 1st July, 1877.—First prize, £10, J. Carwardine (Anxiety); second, £7, J. Price, Court House, Pembroke (Arnold); third, £3, J. Price (Arthur). Reserve number: W. Taylor, Showle Court, Ledbury (The Royalist).

Bull not exceeding two years old on the 1st July, 1877.—First prize, £10, S. Edwards, Wintercott, Leominster (Victor); second, £5, T. J. Carwardine (Ben Battle). Commended: F. Platt, Sugwas Court, Hereford (Post). Reserve number: W. Taylor, Showle (Telescope).

Bull exceeding two years old on the 1st July, 1877.—First prize, £10, W. Taylor (Thoughtful); second, £5, Rev. A. Clive, Whitfield, Hereford (Rasper). Highly commended: W. Taylor (Tantou). Commended: J. L. Hewer, Marden, Hereford (Hero). Reserve: A. Rogers, The Rodd, Kington (Gratol).

Heifer not exceeding one year old on the 1st July, 1877.—First prize, £5, S. Edwards (Beatrice 2nd); second, £3, J. Price, Court House (Spangle). Reserve: W. Taylor (Lancashire Lass).

Heifers not exceeding two years on the 1st July 1877.—First prize, £5, S. Edwards (Leonora); second, £3, S. Edwards (Beatrice).

Heifer in calf or in milk not exceeding three years old on the 1st July, 1877.—First prize, £5, W. Tudor, Adforton, Leintwardine (Beatrice); second, £3, Rev. A. Clive (Belle). Reserve: S. Edwards (Mabel).

Lon in calf or in milk.—First prize, £5, W. Tudor (Rose-

bed); second, £3, T. J. Carwardine (Helena). Reserve: F. Platt (Morella 2nd).

Steer not exceeding one year old on the 1st July, 1877.—First prize, £5, J. Price; second, £3, F. Turner, The Lea, Pembroke. Reserve, W. Taylor.

Steer not exceeding two years old on the 1st of July, 1877.—First prize, £5, W. Taylor; second, £3, W. Taylor. Reserve: F. Turner.

Steer exceeding two years old on the 1st July, 1877.—First prize, £5, F. Platt; second, £3, F. Turner. Reserve: F. Platt.

Four breeding cows or heifers exceeding three years old, in calf or in milk.—First prize, £10, W. Tudor (Bannerette, Giantess, Brunette, and Minnet); second, £5, Rev. A. Clive (Silver 2nd, Sylph, Satin, Saucy); third, £3, F. Platt (Naught, Duchess 3rd, Lovely 2nd, Chance). Highly commended: J. Morris, Latham, Hereford (Chignon, Darky, Pigeon & Brown); J. H. B. Lutley, Brookhampton Park, Worcester (Hagar, Quam Charlotte, Lady Lucy, and Cherry 18th). Reserve: T. Not, Letton Court, Brampton Brian (Melody, 4th, Gem, Lady, and Spangle 3rd).

SHORTHORNS.

Cow and her offspring.—First prize, £10, R. Stratton, The Duffryn, Newport, Monmouthshire (Fair Rosalie).

Bull not exceeding one year old on the 1st July, 1877.—Prize £10, R. Stratton (Carbuncle).

Bull exceeding one year old on the 1st July, 1877.—Prize, £10, C. T. Mynors, Tixall, Stafford (Hindoo Chisel). Reserve: R. Stratton (Hampton).

Heifer, not exceeding one year old on the 1st July, 1877.—Prize, £5. No entry.

JERSEYS OR ALDERNETS.

Bull, not exceeding two years old.—Prize, £3. No entry.

Cow, exceeding three years old.—First prize, £5, J. P. Jones, Overbury Lodge, Hereford (Butter Cup); second, £3, H. Meredith, Kington (Blissom).

DAIRY CATTLE.

Prize, £5. No entry.

SHEEP.

SHROPSHIRE.

Shearling ram.—First prize, £5, J. E. Farmer, Felton, Ladbrow; second, £3, T. Jowitz, The Old Weir, Hereford.

Ram, of any age.—First prize, £5, F. Bach, Onbury, Salop; second, £3, Mrs. H. Smith, Sutton Maddock, Shifnal, Salop.

Five ram lambs.—Prize, £5, Mrs. H. Smith; commended, F. Bach, J. E. Farmer.

Five breeding ewes.—First prize, £5, F. Bach; second, £3, Mrs. H. Smith; reserved, F. Platt.

Five shearling ewes.—First prize, £5, J. E. Farmer; second, Mrs. H. Smith; reserved, T. Jowitz.

Five ewe lambs.—Prize, £5, Mrs. H. Smith.

COTSWOLDS.

Shearling ram.—Prize, £5, J. Gillett, Oaklands, Charlbury, Oxfordshire; second, £3, R. Swanwick, Royal Agricultural College Farm, Cirencester; highly commended, J. Gillett.

Ram, of any other age.—First prize, £5, R. Swanwick; second, £3, R. Swanwick. Highly commended, R. Swanwick.

Five ram lambs.—Prize, J. Gillett; highly commended, Mrs. E. Yeomans, Streton Court, Hereford.

Five breeding ewes.—First prize, £5, Mrs. E. Yeomans; second, £3, W. Wheeler, Long Compton, Shipston-on-Stour.

Five shearling ewes.—Prize, £5, J. Gillett.

Five ewe lambs.—Prize, £5, J. Gillett.

EYELAND, OR ANY OTHER BREED.

(Not qualified to compete as Shropshire or Cotswold). Shearling ram.—First prize, £5, H. J. Bailey, Ruadale, Tebury; second, £3, H. J. Bailey.

Ram, of any other age.—First prize, £5, H. S. Walker, Farmington, Northleach; second, £3, H. J. Bailey.

Five shearling ewes.—Prize, £5, H. J. Bailey.

PIGS.

BLACK BREED.

Boar exceeding nine months old. Prize £3, W. Wheeler, Long Compton, Shipston-on-Stour.

Sow in or with pigs. Prize, £3, W. Wheeler; highly commended, Major D. Popple, M.P., Garatone, Wembley.

WHITE BREED.

Boar exceeding nine months old. Prize £3, W. Wheeler.

Sow in or with pigs. Prize, £3, W. Wheeler.

HORSES.

Agricultural stallion.—First prize, £15, Stephen Davis, Woolashill, Pershore; second, £15, J. Hyde, Riffin Mill, Bodenham, Leominster; reserved, T. Tinsme, Alfrick, Worcester.

Thorough bred stallion suitable for getting sound and stout weight-carrying produce.—First prize, £15, J. Price, Bucknell, Salop.

Stallion suitable for getting sound and stout produce.—First prize, R. Woodward, Towa Farm, Llanvapley, Abergavenny; second, V. Galbraith, Buxton Park, Leinswardine; highly commended, J. Langley, Shirenewton, Chepstow.

Agricultural or cart mare and foal.—First prize, £10, E. Powell, Warham, Hereford; second, £5, E. Farr, Pillith, Knighton, Radnor; reserved, F. Platt.

Filly or gelding foaled in 1874.—First prize, £5, J. Bourne, Home Farm, Barghill, Hereford.

Filly or gelding foaled in 1875.—First prize, £5, S. Davis.

HUNTERS.

Mare and foal not less than 15 hands.—First prize, £10, Major Peplow; second, £5, E. J. Morris, Gwernaffel, Knighton, Radnor. Highly commended: H. J. Bailey (Flower.)

Mare or gelding up to 14 stone.—First prize, £15, Lieut.-Col. T. Heywood, Ode Court, Hereford (Northern Light); second, £5, T. O'daker, (The Valkette). Highly commended: W. M. Hills, Haywood Lodge, Hereford (Samson).

Mare or gelding up to 13 stone.—First prize, £10, Mrs. H. Barton, Stapleton Park, Pontefract (Brenda); second, £5, J. Morgan, Jan., Tardebigg, Bromsgrove, (Lottery.) Highly commended: F. Evans, Old Court, Broadwardine, Hereford, (Sir Isaac).

Filly or gelding foaled in 1873.—First prize, £10, H. J. Bailey, (Proximity); second, £5, E. J. Morris (Katie).

Filly or gelding foaled in 1874.—First prize, £10, Major Peplow (Tibate); second, £5, R. Baskerville-Mynors, Evan-croft, Kingston (Mignonette).

Colt foaled in 1875.—First prize, £5, J. Mason, The Lavacs, Nunnington, Hereford.

Filly foaled in 1875.—First prize, £5, H. J. Bailey, Rosedale, Tenbury, Herefordshire (The Witch.) Highly commended: F. Platt.

ROADSTERS.

Mare or gelding, not under 14 hands, nor exceeding 15 hands.—First prize, £7, F. Platt (Pignette); second, £5, H. J. Bailey. Highly commended: H. J. Bailey (Darkie).

Colt mare or gelding, not under 13 hands, nor exceeding 14 hands.—First prize, £5, A. Ashton, Parkfield, Middleton, Lancashire; second, £3, H. R. Hall, Ashton House, Leominster (Nellie). Highly commended: J. Parry Jones, Overbury Lodge, Hereford (Kitty). Commended: J. Mason; J. Lionel Baring, King-street, Hereford (Dick).

Pony mare or gelding, under 13 hands.—First prize, £3, A. Ashton, Parkfield, Middleton, Lancashire (Tummy); second, £1, W. Pye, Holmer, Hereford (Dick). Commended: S. Smith, Woodmanton, Hereford (Punch).

JUMPING PRIZES.

First day.—For the best jumper in class 46.—Prize, £7, H. W. Lovejoy (The Albert); a special prize, £1, for jumper in any of the hunter classes, H. W. Lovejoy (The Albert).

Second day.—Best jumper in class 4.—Prize, £7, J. Morgan (Lottery); second, special, E. E. Edwards (Taffy).

Third day.—Best jumper in any of the classes.—Prize, £5, H. W. Lovejoy (The Albert). Best jumper of any of the hunter classes of the two preceding days.—First prize, £5, H. Taylor (Jack of Holmer); second, £1, E. E. Edwards (Taffy).

ROYAL OF IRELAND.

MEETING AT GALWAY.—AUGUST 8, 9, AND 10.

The Annual Show in connection with the Society was held this year in Galway, and was, to a great extent, a success. There were a few drawbacks in the first instance, the chief being that the John Taylor, a screw steamer, chartered from Liverpool for the conveyance of the machinery of the English exhibitors, which left Liverpool on Thursday afternoon, and was due in Galway on Saturday night, was not sighted until a late hour on Monday night. The storm was so great during the night after

the vessel was sighted, that she could not come in, and it was feared that she was stranded or wrecked, and no tidings of a positive character could be obtained of the John Taylor until the following morning, so violent was the storm. The greatest uneasiness prevailed amongst the agents and attendants of some fifteen or twenty English exhibitors, all of whose goods were on board, as to their ultimate safety. The Royal and Local Committees were also "in a state of mind" as to the safety of their goods, but fortunately the storm subsided without injury to the vessel, and although there was some delay as regards getting in all the goods at the opening of the Show, the English exhibitors were enabled to make a very presentable appearance. It is now twenty-five years since the Royal Agricultural Society's Annual Show was held in Galway; and then the late Lord Eglinton presided at the banquet.

The Earl of Eglinton said then, "I come to urge upon you the necessity of cultivating that rich soil which will so amply repay your labours. I believe that there can be no doubt that on the proper cultivation of the land all real prosperity is based, and from that source all other prosperity, both commercial and manufacturing, springs. Cultivate your lands, reclaim your waste lands, manure and properly till your fields, drain and subsoil your marshes, cultivate and encourage the growth of flax, mangels, turnips, &c. Only pay to the land the attention which it requires, and every other improvement will follow after, and the merchandise of the world will be your bay."

To those who were acquainted with the state of the County Galway as to live stock in 1852 and 1857, it will be found that the number of cattle in the county in 1876 was 175,351, being 48,346 head more than in 1852, and that the number of sheep in 1876 was 637,157, being 250,800 over the number in 1852. In 1852, however, there were in the county of Galway and other parts of the west of Ireland large areas of land lying untenanted after the famine, and without live stock of any kind. An extensive import trade in live stock from Great Britain sprung up, and gradually the waste lands became stocked.

The Show in 1852 was considered a successful meeting. Mr. Chriap's Phoenix, which had previously proved the premier Shorthorn bull in England and Scotland, got the gold medal, and was sold at the Show to Lord Talbot de Malahide for 200 guineas—a big price at the time. Colonel Towneley's famous Butterfly, then a three-year-old heifer, won the Purcell Cup, and amongst other winners were the Hon. A. F. Nugent's grand cow Maid of Killerby, and his well-known heifers Ruby and Muslin. Mr. R. W. Reynell supplied the Herefords; Lord Talbot de Malahide was strong in polled Angus cattle; and Mr. William Owen in West Highlands. The show of sheep was very good. The leading exhibitors of Leicesters were Mr. Fred. T. Hamilton Seales, of Yorkshire; George Spencer, of Leicester; and Mr. Thomas Roberts, of Stokestown. In "other long-wooled breeds" Mr. Sylvester Rait, Mr. D. Kerr, Mr. F. T. Hamilton, and Mr. Samuel Garnett were the winners of prizes. In the implement department there were 25 stands of implements and farm produce. One reaping machine, Hussey's improved, was exhibited by Crosskill, and judging from the report, did not work very satisfactorily.

In the Galway meeting of last Wednesday the Lord Lieutenant and her Grace the Duchess of Marlborough, who had been the guests of Lord Gough, the President of the Society, since Monday, visited the Show in the afternoon, and spent a considerable time in going through the different departments.

The chief feature was the Shorthorns, which were visited by large numbers throughout the day, and in reference to which the judges made a special memorandum

as to excellence generally of the various classes of the Shorthorned cattle. There were some excellent specimens of horned stock, many of the animals having won honourable ribbons already, as a reference to the list of prizes will show.

In the Leicester Department there was nearly an average. In the shearling ram class Mr. Seymour Massby deservedly took first prize, Mrs. Meade taking second, and Mr. R. Cooke third. Mr. Cooke's rams, we might add, were highly commended.

In the Border Leicesters Messrs. Duthie and Beat took first prize, Mr. Leigh second prize, and Mr. M. H. Arnes third. Lord De Vesci took the first prize in the aged class, won by a lengthy ram, and Messrs. Arnes and Mathers second. Mr. F. A. Leigh, formerly known to Wexford agriculturists, took the first prize in the shearling ewe class, exhibiting some magnificent sheep, as to quality of flesh and wool.

So far as the shearling rams are concerned, it will be sufficient to mention that with scarce an exception, Mr. Bland's Lincolns carried off the prizes; whilst Messrs. Hannan and R. R. Jersee's were highly commended.

The practice being prevalent in the counties of Roscommon and Galway of shearing sheep in the very early spring, the show of rams was, in this respect, by no means satisfactory, and the result was that disqualifications took place, which, under ordinary circumstances, would not have occurred.

The show of pigs was creditable, and in point of quality excellent. The first honours were awarded to Mr. Glenn, Waterside, Londonderry, who is entitled to public recognition as a breeder of some very valuable cattle. The poultry was of an average class, some of the cages being very good.

Mr. M. Mahony, of Baldoyle, exhibited some very fine specimens. Mr. J. B. Smyth took the first prize in duck Brahma, and in French fowl, game, &c. Mr. Mackay's display was highly popular.

PRIZE LIST.

JUDGES.—**SHORTHORNS:** A. Mitchell, Alloa, N. B.; and E. W. Meade-Waldo, Stonewall, Kent. **OTHER BREEDS:** J. Marston, Arbour, Eardisley. **HEREFORDS:** E. Rae, Keel, Castlemaine. **LEICESTERS AND OTHER LONG-WOOLLED SHEEP:** T. Morris, Croxton, Ulesby; A. Warburton, Kell, Straffan. **BORDER LEICESTERS, CHEVIOTS, AND BLACKFACED:** J. S. Dudgeon, St. Boswell's, N. B.; W. Johnson, Cnathill. **ROSCOMMON SHEEP:** J. Simson, Ballinrobe; R. Glancy, Roscommon. **SHORT-WOOLLED SHEEP:** R. H. Masfen, Wolverhampton; R. Jones, Norton, Shrewsbury. **PIGS:** A. Warburton, Kell, Straffan; J. C. Cooper, Cooperhill, Limerick. **PRODUCE:** W. A. Greene, Mullingar. **CEREALS:** J. Robertson, Malahide. **THOROUGH-BRED HORSES, HUNTERS, PONIES, &c.:** Earl of Huntingdon, Sharavogue, Roscrea; H. M. Richardson, Rosafad, Lallycassidy; Colonel Carden, Knightstown, Portarlington. **AGRICULTURAL HORSES:** A. Mitchell, Alloa, N. B.; D. Kerr, Clovis, Edenderry.

CATTLE.

SHORTHORNS.

The Pardon Challenge Cup, value 60 guineas, for the best Shorthorn bull calved on or after 1st January, 1872.—R. Chelouet, Kingscourt, Moyalty (Royal Arthur).

Bull calved on or after 1st January, 1872, and previous to the 1st January, 1875.—First prize, R. Chelouet (Royal Arthur); second, T. K. McClintock, Banbury, Carlow (Anchor); third, A. H. Browne, Chathill, Northumberland (Pioneer).

Bull calved in 1875.—First prize, R. Reynell, Killynaon, Killynaon (Prince James); second, Mrs. Villiers Stuart, Castle-town, Carrick-on-Suir (The Lord of the Soil); third, J. Ganly, Newtownforbes (Manfred).

Bull calved in 1876.—First prize, Captain Cosby, Queen's County; second, B. J. Greene, Lecarrow (Prince Rupert); third, Lord Clonbrock, Ahascragh (Famous Lad).

Cow in calf or in milk.—First prize, P. Taaffe, Foxborough, County Roscommon (Daisy II.); second, H. L. Barton, Straffan (Duchess of Leinster).

Heifer calved in 1876.—First prize, P. Taaffe, Foxborough, County Roscommon (Snowflake); second, Captain Cosby, Queen's County.

HEREFORDS.

Hereford bull of any age.—First prize, G. A. Stephens, St. Doulough's, County Dublin; second, W. Reynell, Killynaon, Killynaon.

Hereford cow in calf or in milk.—Prize, W. St. George, Oranmore, county Galway.

Heifer calved in 1875.—Prize, G. A. Stephens.

POLLED ANGUS.

Polled Angus bull of any age.—Prize, Sir C. Knox Gore, Belleek Manor, Ballina.

Polled Angus cow in calf or in milk.—Prize, A. Pollok, Ballinasloe.

AYRSHIRE.

Best Ayrshire cow in calf or in milk.—Prize, D. Patton, Glaslough.

Ayrshire heifer calved in 1875.—First prize, D. Patton, Glaslough.

WEST HIGHLAND.

West Highland cow in calf or in milk.—First prize, J. F. Bagot, Aughrane, Ballygar.

KERRY.

Kerry bull of any age.—First prize, J. Robertson, Malahide, Basaco.

Kerry cow in calf or in milk.—First prize, J. Robertson.

Kerry heifer of any age.—First prize, J. Robertson.

ANY OTHER BREED OR CROSS BREED NOT CLASSED.

Cow in calf or milk.—First, W. B. P. Troundell, Athenry.

Heifer of any age.—First, W. B. P. Troundell, Athenry.

TENANT-FARMERS' COMPETITION.

Cow in calf or milk.—First, D. Patton, Glaslough; second, M. Cottingham, Galway.

Heifer calved in 1875.—First, D. Patton.

SHEEP.

LEICESTERS.

Shearling ram.—First, S. Mowbray, Killeany, Mount-rath; second, W. R. Meade, Ballinacraig; third, R. Cooke, Fethard.

Ram of any age.—First, W. R. Meade; second, same.

Pen of five shearling ewes.—First prize, R. Cooke, Fethard; second, same.

BORDER LEICESTERS.

Shearling Ram.—First prize, Duthie and Beate, Stradbally, Queen's County; second, F. R. Leigh, New Rose; third, M. H. Franks, Mount-rath.

Ram of any other age.—First prize, Viscount de Vesci, Abbey-leix; second, Arnes, Mather, and Arnes, Killy, Ballinacraig.

Pen of five shearling ewes.—First prize, F. A. Leigh, New Rose; second, M. H. Franks, Mount-rath.

LONG-WOOLLED OTHER THAN LEICESTERS OR BORDER LEICESTERS.

Shearling ram.—First prize, J. L. Bland, Abbey-leix; second, same; third, same.

Ram of any other age.—First prize, J. L. Bland; second, B. Hannan, Killynaon.

Pen of five shearling ewes.—First prize, B. Hannan, Killynaon; second, J. L. Bland.

ROSCOMMON.

Shearling ram.—First prize, B. Hannan, second same; third, Captain Balf, Castleroa.

Ram of any other age.—First prize, B. Hannan; second Capt. Balf, Castleroa; third, B. Hannan.

Pen of five shearling ewes.—First prize, B. Hannan, Killynaon; second, Capt. Balf, Castleroa.

BLACKFACED.

Ram of any age.—First prize, W. Beattie, Pettigo; second, same.

Pen of five ewes of any age.—First prize, W. Beattie, Pettigo; second, same.

SHROPSHIRE SHEEP.

Challenge Cup for the best shearling Shropshire Down ram; to be won three years.—J. L. Naper, Loughcrew, Odcasle.

Shearling ram.—First prize, J. L. Naper; second, same; third, C. W. Hamilton, Clones.

Ram of any other age.—First prize, J. Peake, Monaghan; second, C. W. Hamilton.

Pen of five shearing ewes.—First prize, J. Peake, Monaghan; second, same.

Limited for competition to tenant farmers. Pen of five ewes of any age.—First prize, Duthie and Beate, Stradbally; second, W. H. Halliday, Ballina.

PIGS.

COLOURED BREEDS.

Boar over 18 months and under 36 months old.—First prize, Lord Clonbrock, Ahascragh; second, D. Glenn, Londonderry.

Breeding sow under 18 months old.—First prize, D. Glenn, Londonderry; second, T. K. M'Clinck, Carlow.

Breeding sow over 18 months old.—First prize, D. Glenn; second, J. K. Millner, Dublin.

Sow and litter of not less than six pigs under three months old.—Prize, J. Molloy, Dublin.

Three breeding pigs of the same litter above three and not exceeding eight months old.—First prize, T. K. M'Clinck, Carlow; second, D. Glenn.

WHITE BREED.

Boar under 18 months old.—First prize, Lieutenant-Colonel D. Cooke, Mold, North Wales; second, same.

Boar over 18 and under 36 months old.—Prize, Lieut-Col. D. Cooke.

Breeding sow under 18 months old.—First prize, J. Mo'loy, Dublin; second, T. W. Webber, Portlinton.

Breeding sow over 18 months old.—First prize, J. Molloy; second, Lieut-Col. D. Cooke.

For the best sow and litter of not less than six pigs under three months old.—Prize, Earl of Wicklow, Arklow.

Lot of three breeding pigs of the same litter above three and not exceeding eight months old.—First prize, Lieut-Col. D. Cooke; second, D. Glenn.

TENANT-FARMERS' COMPETITION.

For the best breeding sow over six and under 18 months old.—First prize, D. Glenn; second, same.

Breeding sow over 18 months in pig or with a litter under three months old.—First prize, D. Glenn; second, same.

To tenant-farmers whose valuation is under £50 per annum. Breeding sow.—First prize, D. Glenn; second, same.

HORSES.

The Croker Challenge Cup, value 50 sovereigns, for the best weight-carrying thoroughbred stallion.—Prize, J. M'Mahon, Rahen, Queen's County.

THOROUGHBRED STALLIONS.

Thoroughbred sire for breeding purposes.—First prize, J. M'Mahon; second, Messrs. Christy, Brothers, Adare, county Limerick; third, P. O'Connor, Queen's-street, Dublin.

AGRICULTURAL STALLIONS.

Agricultural stallion of any breed.—First prize, Arres, Mather, and Arres, Falty, Ballinaloe; second, Hon. N. G. Mahey, Clarina, county Limerick; third P. O'Connor.

The Scotcherath Challenge Cup of 40 guineas (limited to Irish exhibitors only) for the best agricultural brood mare in foal, or having produced a foal in 1876 or 1877.—Prize, B. Hannan, Killucan.

Agricultural brood mares in foal, or having produced a foal in 1876 or 1877.—First prize, B. Hannan; second, W. Irvine, Fraakfeld, Cork; third, Arres, Mather, and Arres.

Mares calculated to produce weight-carrying hunters, in foal, or having produced foals in 1876 or 1877.—First prize, Capt. Cosby, Stradbally Hall, Queen's County; second, Rev. R. D. Falkiner, Claremorris; third, J. Blake, Galway.

HUNTERS.

Gelding or mare not less than five years old, able to carry 14 stone and upwards.—First prize, Capt. M. J. Balfe, Castle-re; second, B. Sweeney, Cahir, County Roscommon.

Gelding or mare not less than five years old, able to carry from 12 to 14 stone.—First prize, T. A. Costello, Galway; second, F. B. Lambert, Athenry; third, M. B. Joyce, Rossina, Clonbar.

Four year old gelding or mare calculated to make a weight-carrying hunter.—First prize, P. Taaffe, Foxburgh, county Roscommon; second, J. Golding, Carnane, Tuam; third, A. Ball, R. M., Tuam.

Geldings or fillies foaled in 1874 calculated to make good hunter.—First prize, R. Pigott, Capard, Rosenthal; second, Rev. J. Commins, P.P., Galway; third, Capt. D. Rutledge, Tuam.

Two-year-old gelding or filly calculated to make a weight-carrying hunter.—Prize C. J. O'Kelly, Gallagh, Tuam.

LADIES' HORSES.

First prize, Miss Perse, Moyode Castle, Athenry; second, P. Joyce, jun.

Connemara ponies not over 14 hands, any age, trained.—First prize, R. Strout, Oakmount, Tuam; second, Capt. D. Rutledge.

DAIRY PRODUCE.

Firkin of butter of not less than 65 lbs., made on the farm of the exhibitor during 1877.—First prize, P. Crowe, Killeenora county Clare; second, W. B. P. Trousdell.

Cool of butter, not less than 30 lbs., made on the farm of the exhibitor during 1877.—First prize, P. Crowe, county Clare; second, D. Driscoll, Clogher, county Cork.

Three rolls or prints of fresh butter.—Prize, Mrs. Lynch.

BADMINTON FARMERS' CLUB.

The nineteenth annual Exhibition of the Badminton Farmers Club was held on August 8th, in that portion of the Duke of Beaufort's park known as "The Huntsman's Close." The weather was very far from propitious, heavy downpours of rain being the order of the day, but this did not prevent a very large influx of visitors from Bristol and the country surrounding the scene of the Show. The Show itself may be pronounced a decided success, although in some classes there was a falling off in the number of entries as compared with former years, but this was fully compensated for in the numbers that were entered in other classes. The entries of horses were about 120; cattle, 48; sheep, 29; pigs, 4; roots, 8. The horses were the most prominent feature of the Exhibition, and as usual with the Badminton Show the hunting classes were extremely well represented, as Badminton is the centre of one of the largest hunting districts in the kingdom. His Grace the Duke of Beaufort, as on former occasions, exhibited in the extra stock classes, and his animals were greatly admired for their extremely fine forms. In the class for yearlings, colts, or fillies there were eleven entries, and a better lot of colts it would be difficult to find. The class for two-year-olds was one of the best ever shown, the whole of the class being commended. Capt. Blathwayt took the first prize with a splendid chestnut filly, and the spectators were loud in their praises of her as she was paraded in the ring. In both these classes the Duke of Beaufort and the Marquis of Worcester exhibited extra stock. The three-year-olds were also an excellent class, and Mr. Brown's bay filly was well worthy of taking first honours, being an extremely handsome animal. In the four-year-olds Capt. Blathwayt again took first prize with a bay filly, by Birdhill, and Mrs. Granville Somerset's Forester, which took the blue ribbon in the five-year-old class, was a very shapely animal, and well deserved the admiration it evoked. The prize offered by the Duke of Beaufort, for competition amongst his tenants, for the best hunter, mare or gelding, of five years old, fell to the lot of Mr. J. Bennett's fine grey gelding Robin. The three-year-old roadsters were a very large class, and included some very useful animals; and the ponies were so good that the judges commended four of them, the extra stock shown by the Duke of Beaufort and Mr. C. H. Pyatt being exceptionally good. In the entries of horses for agricultural purposes there was a slight falling off, and the quality of some of the animals was inferior. The class for brood mares and foals for agricultural purposes was a really good one, and four animals out of five shown were commended by the judges. Mr. Teagle, of Chippenham, exhibited a very nice mare, but being faulty in the neck the judges passed her over for the first prize. The Duke of Beaufort in this class showed a very fine mare as extra stock, and she was highly commended. There was a good competition in the two-year-old gelding and filly class, and a bay Clydesdale mare shown by the Duke of Beaufort as extra stock was highly commended. There were forty-eight entries in the cattle classes, but there was a very small show of bullocks. The show of cows and heifers was, on the other hand, extremely good, and the competition in many instances very keen. The Shorthorns were particularly good, and the competition between Mr. Thomson, Mr. Long, Mr. Goulter, and Mr. Gould was ex-

tremely close. The show of sheep was fairly large for Badminton, but there was only one entry for short-wools, and the prize was withheld. The long-wools were very good indeed. The entry for pigs was small. In the root classes there were eight entries. The time for roots is rather early, and taking this into consideration the specimens shown were highly creditable. The horticultural show may be pronounced very good. The floral exhibits of the cottagers deserve the highest commendation, especially the dahlias; and the vegetables were the finest lot we have ever seen. The cottagers also displayed the greatest taste in the hand bouquets. In class 81, for the best nosegay of wild flowers made by school children, there were 72 entries, and it is surprising what artistic taste some of the little ones showed in assorting the flowers. We must not forget to mention the table decorations, which were really very beautiful. At five o'clock there was a series of jumping prizes competed for by hunters, roadsters, and ponies, and this attracted universal attention. Mr. Dyer, of Staple-hill house, Bristol, took two first prizes with his bay gelding by Londoner which is an extremely clever fence, and took the hurdles in splendid style. The competition was very keen, all the horses entered being very good jumpers. Mr. S. Summer's grey mare took the first prize for roadsters or ponies. There were three flights of hurdles, the first flight having some stiff fences on the top, and the second flight was placed within a few yards of it, thus making the jumping very difficult.—*Bristol Times*.

DURHAM COUNTY.

The thirty-fourth annual Show in connection with this Society was held at West Hartlepool, on Aug. 19, in a spacious field at Belle Vue, belonging to the North Eastern Railway Company. The weather was dull, and at times showers fell, this doubtless having a good deal to do with the paucity of attendance, which was undoubtedly much below the past year at Sunderland; still, the number of persons who passed the gates could scarcely have been less than 12,000 or 13,000. Although limited in many respects, the Show abounded in quality, this being very noticeable in the hound cattle classes, in which the honours were shared chiefly between Mr. W. H. Linton, Sheriff Hutton, York, who carried off the principal prizes for bulls, and Mr. Mr. Hutchinson of Catterick, whose name is a household word in the Shorthorn classes at most of the local shows. The exhibitors of pigs included Mr. Duckering, who, it is needless to say, carried off the highest honours of the day in this department. In almost all the leading classes Messrs. Green and Sons, of Silsdale, Leeds, took the valuable prizes; but for shearing rams Mr. Hutchinson was the successful competitor. In the open hunter's class the ten guinea cup, given by Mr. I. L. Bell, M.P., as well as the first prize in Class 82, fell to the share of Mr. Hutchinson's "Glengyle." There were some rare young cart horses, and in these classes the Marquis of Londonderry was a formidable competitor. Mr. T. Bowman, of Nidmire, achieved the almost unprecedented feat of carrying off, with the same animal, the first prize in Classes 53, 54, and 55 for the best gentleman's hack, the best roadster under 15.2, and the best ladies' hack. A very strong class of ponies competed in Class 56, the first honours falling to Mr. Stephenson, of Leeds, with "Princess," the second honours falling to Mr. George Pyman, of West Hartlepool; and in the pony class, limited to 12 hands, the former gentleman was also successful. The luncheon was held in a spacious tent, and capitally served by Mr. Hubson, of the Commercial Hotel, but owing to the customary courtesy to the representatives of the press being withheld, we need only say that Mr. I. L. Bell, M.P., occupied the chair. Appended is a list of the awards:—

CATTLE.—Shorthorned bulls, exceeding two years old, 1 and cap, W. Linton, Sheriff Hutton, York. Shorthorned bulls, exceeding one and under two years old, 1, W. Linton, York; 2, W. Tennant Barlow, Selby, York. Shorthorned bull calves, under 12 months, 1, J. Strickland, Thirsk; 2, T. H.

Hutchinson, Manor House, Catterick. Shorthorned cow, in calf or milk, having had a calf within the last 13 months 1 and cap, T. H. Hutchinson, Catterick; 2, J. Nimmo & Son, Castle Eden. Shorthorned heifers, not exceeding three years old, in calf, 1, T. H. Hutchinson, Catterick; 2, Messrs. Dovener, Threakestone Grange, Bedale. Shorthorned yearling heifers, 1, W. Linton, York; 2, Messrs. Dovener, Bedale. Shorthorned hunter calves, under 12 months old, 1, J. Nimmo & Son, Castle Eden. Shorthorned bulls, under four years old, belonging to a tenant farmer in the county of Durham, J. Vickers, Mowen Meadows, Crook; 2, Messrs. T. and Emerson, Unthank, Stanhope. Shorthorned cows, in calf or milk, having had a calf within the last 13 months, 1, Johnson, Harrogate, Darlington; 2, E. J. Weightman, New Ford, Pallion, Sunderland. Shorthorned heifers, not exceeding three years old, in calf, 1 and 2, J. Vickers, Crook.

DAIRY CATTLE.—Cows of any breed, for dairy purposes, in calf or milk (not eligible for entry in the herd book, and not in possession of exhibitor three months before the day of show), 1, J. Bellwood, Northallerton; 2, J. Henderson, Aycliffe, Darlington.

FAT AND GRAZING CATTLE.—Fat beast, G. J. Robins Thirsk; 2, A. Wilkinson, Castle Eden.

SHEEP.—Leicester or Long-wool.—Ewes, two shear upwards, 1, Messrs. J. Green and Son, Silsden; 2, T. Hutchinson, Catterick. Shearling rams, 1 and 2, T. H. Hutchinson, Catterick. Pen of five ewes, having reared in this year, 1, Messrs. Green and Son, Silsden; 2, R. Harrison, Fould Dale. Pen of five shearing gimmers, 1, T. H. Hutchinson, Catterick; 2, R. Harrison, Fould Dale. Pen of seven gimmers of any breed, 1, Messrs. J. Green and Son, Silsden.

PIGS.—Boars of the large breed, 1, R. E. Duckering, Lincoln; 2, J. M. Morrin, Sedgefield. Boars of the small breed, 1, R. E. Duckering, Lincoln; 2, J. A. Lynn, West Hartlepool. Sows of the large breed, R. E. Duckering, Lincoln. Sows of the small breed, 1, R. E. Duckering, Lincoln; 2, M. Lynn, West Hartlepool. Pen of breeding pair of any breed, from four to nine months old, 1, R. E. Duckering, Lincoln. Cottagers' pigs whose rental does not exceed £10, 1, G. Riddle, West Hartlepool; 2, S. Fox, West Hartlepool. Pigs belonging to cottagers residing within the parliamentary borough of the Hartlepoons, 1, J. White, West Hartlepool; 2, G. Sinclair, West Hartlepool.

HORSES.—Mares for breeding roadsters, with foal at foot, J. Kirby, Stamford Bridge, York; 2, J. M. Messer, Hut Rudby, Yarm. Mares for breeding harness horses, with at foot, F. Stainthorpe, Hawker, Whitby; 2, J. and Reader, Holme, York. Mares for breeding draught horses with foal at foot, H. Pullaine, Baxter Hall, Selby, York. W. J. Dobson, High Grange, Wolsington. Draught mares, having produced a foal in 1877, but to produce a living foal in 1878, W. Howdon, Pockley, Chester-le-Street; 2, Marquis of Londonderry, Seaham Hall. Hunters, five years old upwards, mares or geldings, T. H. Hutchinson, Manor House; 2, C. J. Johnson, Oakwood, Croft. Four-year-hunters, mares or geldings, J. Welborn, Mowthorpe Hall, Scarborough. Hunters, mares or geldings, exceeding five years old, A. Stephenson, Hart Manor, Castle Eden; 2, W. Brown, Sheraton, Castle Eden. Three-year-old hunters, W. Scott, Brown Close, Boroughbridge; 2, T. L. son, Marwood. Three-year-old hunting fillies, G. Lancaster, Morton Grange. Two-year-old hunting geldings, G. Lancaster; 2, J. T. Scarr, Kirky Sigaton, Northallerton. Two-year-old hunting fillies, J. Davison, jun., Trittlington Hall; 2, J. W. Seston Carew, West Hartlepool. Two-year-old hunting fillies, 1, G. Lancaster, Morton Grange; 2, Marquis of Londonderry, Seaham Hall. Two-year-old fillies, 1, Marquis of Londonderry, Seaham Hall; 2, G. Thompson, Hyton Am York. Three-year-old gelding, 1, R. T. Ogle, Keadyther Malton. Three-year-old fillies, 1, W. Howdon, Pockley, Chester-le-Street; 2, J. Waddell, Edinburgh and Sowerby. Two-year-old geldings, 1, Marquis of Londonderry, Seaham Hall; 2, Messrs. Elliott and Hunter, Charlaw Colliery. Two-year-old fillies, 1, J. Waddell, Edinburgh; 2, Marquis of Londonderry, Seaham Hall. Yearling geldings, 1, G. Crox Dauby Wake, Northallerton; 2, S. Putte, Mill House, Seaham. Yearling fillies, 1 and 2, Marquis of Londonderry, Seaham Hall. Pair of draught horses, of either sex, cap, Banlett, Larch House, Greatlaw, West Hartlepool; 2, —

Baise, jun., High Peasmoor Hill, Dartington. Dray or colley horses, 1, 2, and cap, J. Waddell, Edinburgh. Dray or colley horses, either sex, cap, B. Lander. West Hartlepool; 3, W. Waddell, Sunderland and Edinburgh. Gentlemen's hack. Hack, mares or geldings, 1, T. Bowman, Troon House, Sreder, York; 2, Dr. Merryweather, Guisbrough, York. Roadsters, mares or geldings, any age, not exceeding 15½ hands, 1, F. Bowman, Troon House, Sreder; 2, Dr. Merryweather, Guisbrough. Ladies hackneys, mares or geldings, 1, T. Bowman; 2, J. Welburn, Mowthorpe Harbours. Ponies, mares, or geldings, not exceeding 14 hands, 1, J. Stevenson, Bonmahy-road, Leeds; 2, G. Fyman, jun., Rosebank, West Hartlepool. Ponies, mares, or geldings, not exceeding 12 hands, 1, J. Stevenson; 2, S. Gourley, West Hartlepool. Mares or geldings, exhibited and driven in single harness, 1, R. Morris, Scoresby, York; 2, R. M. Gallow, Royal Hotel, West Hartlepool. Cobs or ponies, not exceeding 14 hands, to be exhibited and driven in single harness, 1, T. C. Hutchinson, Hilber House, Middleborough; 2, W. Richardson, West Hartlepool. Hackers of any age, mares or geldings, 1, J. Welburn; 2, W. Langford, Mill Hill, Haydon Bridge; 3, H. Davison, Trittington Hall. Mares or geldings not exceeding 14 hands, that shall leap the artificial fences the best, 1, W. Atkinson, Waldron House, Bishop Auckland; 2, W. Furness, Sedler's Hotel, Stockton.—*Leeds Mercury.*

BLACKPOOL AGRICULTURAL SOCIETY.—The tenth annual exhibition of the Blackpool and Fylde Agricultural Society was held on August 25, at Raikes Hall Park, Blackpool, and, favoured by fine weather, was a great success. The promoters of the show are especially fortunate in having so admirable a site as the Raikes Hall estate for holding the exhibition. The number of entries was large, being 869—an excess in almost every department. This increase is shown especially in the horses, a class which numbers 277 this year against 175 last year. The cattle also show remarkably well both in quality and quantity, the agricultural horses especially being the best ever shown in this part of the country, in some of the classes even beating winners of the Royal Show which have competed with them. The sheep are a very fair class—so good as can be expected in a grass country. The dogs and poultry are also quite up to the mark. The following are some of the principal awards:—Two-year-old bull, of any breed.—1, T. Atkinson, Unsworth; 2, R. Thompson, Blackpool. Bull under two years.—1, J. Thompson, Elswick; 2, B. Bee, Goussanburgh. Bull calf.—1, B. Bee; 2, R. Thompson. Two dairy cows, in calf or milk.—1, W. Nelson, Preston; 2, J. Bradshaw, Bispham. Dairy cow above three years.—1, T. Atkinson; 2, W. Nelson, Cadley. Heifer above two years and under three.—1, W. Nelson; 2, T. Atkinson. Heifer between one and two years.—1, J. Nelson; 2, T. Atkinson. Heifer calf.—1 and 2, R. Thompson. Fat cow.—1, T. Masheter, Raikes Hall; 2, R. Walker, Peel. Pair of agricultural horses.—1, J. Parkinson, Moss Hall; 3, W. Kirkham, Poulton. Pair of draught horses.—1, C. W. Brierley, Preatish; 2, Mrs. Nancy Hornby, Preston. Brood mare for agricultural purposes.—1, J. Jackson, Stalmine; 2, J. Parkinson, Lytham. Brood mare for draught purposes.—1, P. Blandell, Weston; 2, R. Porter, Fleetwood. Mare or gelding for agricultural purposes, three or four years.—1, Executors of R. Thorntons, Garstang; 2, J. Parkinson. Ditto for draught purposes.—1, P. Blandell; 2, J. Fisher, Blackpool. Two-year-old gelding or filly for draught or agricultural purposes.—1, R. Balderstone, Nately; 2, T. Blandell. Yearling gelding or filly for draught or agricultural purposes.—1, Mary Hotherall and Son, Fulwood; 2, R. Thompson. Colt or filly foal ditto.—1, D. Dewhurst, Weston; 2, J. Fisher. R. Porter and J. Bowman obtained respectively the first prizes offered by Fylde Cattle-Breeding Improvement Company for the best colt and filly foal. The judging for the remaining classes of horses was not completed until a late hour. In the class of sheep the prize for the long-woolled ram was taken by H. L. Biley, Kirkham; and for the long-woolled ram lamb, by J. Walla, Freckleton. Mr. Brierley was also first in the class of short-wool rams; in fact, he carried away the whole of the first prizes in these classes. In the class for pigs S. Wilson, Hambleton, obtained first honours in every class. The poultry, dogs, and vegetables also made a very respectable show. The afternoon was devoted to keeping contests.—*Manchester Examiner.*

ACTION BY THE LONDON AND NORTH-WESTERN RAILWAY COMPANY.

IMPORTANT TO FARMERS.

At the Bloomsbury County Court, on Friday last, the case of the Company v. Wood was heard before Mr. Judge Russell, in which the plaintiffs sued the defendant, a farmer, at Boddycote, near Banbury, to recover the sum of £4 odd for carriage of 84 sheep from Banbury to Maiden-lane, London. Mr. Harmsworth, the Company's counsel, having proved the plaintiff's claim, the defendant was called upon to prove his counter-claim, and in doing so said that on the 28th October last he sent 84 sheep from Banbury to London, and instead of reaching the Cattle Market in the state in which they were sent, they were, by being improperly packed in the trucks provided by the Company, in such a state that, instead of realizing 67s. each, 80 were sold at 60s., and 24 at 55s. He now said the Company by way of counter-claim. The plaintiff in the counter-claim, proved his claim by the evidence of Knowles, a drover in the market, who said the sheep were loaded "thick," and in consequence of which they were trampled on and their wool made dirty. Thomas Dodd, a salesman in the Cattle Market, said that in consequence of the sheep being improperly packed they had deteriorated in value about 4s. each. The Company called several witnesses to prove that the truck had been loaded at Banbury by the directions of the plaintiff, and that if any injury had been incurred it was entirely owing to his negligence, and not attributable to the Company or their servants. The foreman at Maiden-lane said it was not an uncommon circumstance to put as many as 40 sheep in a large truck. He had done so frequently. He unloaded about 1,800 wagons a week. After his evidence, his Honour said that as the carriage was not in dispute there would be a verdict for the Company on that ground, and that so far as the set off had to be considered, he was of opinion that the sheep had been packed under the plaintiff's supervision; therefore he should give judgment in favour of the Company, with costs.

WHEN TO CUT WHEAT.—Wheat should never be fully ripe before cutting, for it then loses colour, weight, and quality, and is liable to loss from shedding in the field. But it unfortunately happens that in this age of inquiry and competitive trials we cannot adopt an improvement without rushing into the opposite extreme of the fault we would remedy. It is so in the case of harvesting, as some one or two of our neighbouring farmers will find to their cost this season, if they will but fairly test the question. Wheat can never be cut, without undue shrinking of the kernel, until you can press it (the kernel) between your thumb and forefinger without squeezing out any liquid, or "milk," as farmers call it. If cut until this, in the process of ripening, is converted into a substance like "dough," a sure loss of measure—sometimes very serious—will be the result, and no advantage gained, as is most mischievously held by some theoretical writers to whom amateur farmers are too prone to listen, over what eat when the milk is quite out of it. A week after that stage it will still be in the best condition for cutting, and even should a small portion be standing a little longer no harm will come of it, and the extra bushels in yield will far more than compensate for the loss of a little colour and weight which the prematurely cut may possess. In years past I have thoroughly tested the three systems: cutting green—when the milk is just out, and when "goose-necked" or dead ripe, and I always found the trial decidedly against the green cutting. There is risk in the over-ripe system if high winds prevail, but the chances are that once in three years you may lose two bushels per acre blown out, while by cutting too early you certainly lose every year from four to six bushels per acre by shrinking. But there is no need in these days of efficient machinery for prolonging the wheat cutting on any farm beyond ten days, which will admit of waiting until it is properly fit before beginning, and finishing before any of the crop is over-ripe and in danger of shedding.—*J. T. T. in Hampshire Chronicle.*

A NEW INSECT PEST.—A companion to the Colorado beetle has manifested itself in an anonymous insect just discovered in Hungary, Latvia, and other Austrian provinces. Its special weakness is for maize. Nearly five hundred fields of maize are said to have been attacked by the enemy. It attacks the crown of the root of the maize plant, whereupon the plant turns yellow, sickens, and bears no fruit.—*Mayfair.*

CHAMBERS OF AGRICULTURE.

SCOTTISH.

The half-yearly general meeting of the Scottish Chamber of Agriculture, was held at Perth, on Friday, August the 10th, Mr. Melvin, of Bonnington, President of the Chamber, occupied the chair.

THE ABOLITION OF AGRICULTURAL HYPOTHEC.—Mr. A. E. MACKNIGHT, Edinburgh, moved the following resolution:—

"The attempts in Parliament to deal with the abolition of the law of agricultural hypothec having failed, this meeting renews the resolution of last meeting at Perth, viz., to use every means in the power of the Chamber and of individual members thereof to have that law, which blocks agricultural advancement and the growth of the people's food, removed from the statute book; and, seeing the unanimity of Scotch members on the subject, to petition the Government to introduce such a Bill as a Government measure."

This resolution would, he thought, meet with the approbation of every member of the Chamber. He thought the present was the proper time to make renewed expression of their opinions on this subject. They had seen another session of Parliament almost at a close, and the result of it had been a total failure: there had been nothing done in regard to this subject. There had been a studied and evident wish on the part of the Government, and generally speaking of Parliament, that this measure should not be passed at all. It was, therefore, most proper that they should emphatically declare their opinions again on the subject, it being their business as a Chamber of Agriculture to enlighten the country and Parliament on this question. They condemned this law of agricultural hypothec in the first place as being a law of special privilege, as a law of protection to one class of the community. He believed they were all free-traders, and they condemned the principle of any law which gave protection to any particular class. Then the question arose, this being a law of special privilege, was it a just one? Let them look at how it worked. Under this law, which secured the whole crop on the ground to the landlord, it was quite clear in the first place, that this injured the tenants' capital,—they could not get assistance from friends, landlords, nor from bank, in order to carry on in a vigorous way the cultivation of their farms, because of the landlord's prior claim, which swallowed everything. The tenant's object should be to cultivate the soil as highly as he could, but with his credit crippled in that way he was prevented from doing justice to the land. And what was the result? It was simply this, that the land was not done justice to, there was not a sufficient amount of capital brought to bear on its cultivation, and consequently there were poor crops. That being so, all parties suffered. The tenant suffered by not reaping the benefit of his crop, and the public suffered because the crop was not so large in amount as it would have been had the land been thoroughly cultivated. These were very important and strong grounds on which they condemned the existing law. The resolution was agreed to.

ROADS AND BRIDGES BILL.—On this subject the following resolution was passed:—

"That the Chamber appoints the directors and such of them as can attend to wait in deputation on the Lord Advocate, to urge upon his Lordship the re-introduction of his Bill, with such amendments as the Chamber has to submit to him.

THE IMPORTATION OF CATTLE DISEASE.—Mr. SMITH, West Drums, in rising to move a resolution on the above subject, said he did so with some hesitation, as he would have preferred to have had more time to go over the particulars bearing upon it. He was aware that very able evidence had been given before the Select Committee of the House of Commons on this subject by their President, Mr. Melvin, but they had not had an opportunity of seeing the evidence at very great length. He was in expectation that they would have that day had a copy of the evidence in an extended shape, when they would have been better able to have satisfied themselves on some points which were still not quite explained. He had, however, great pleasure in moving, "That the Chamber records its thanks to Mr. Melvin for the satisfactory evidence he gave before the Cattle Plague Com-

mittee, and resolves to petition for legislation generally on the lines of the report of the Committee recently issued." So far as he had seen, Mr. Melvin's evidence was of the most satisfactory kind, and would not be found to conflict with the opinions of almost any member of the Chamber. He would refer, in particular, to one or two points where Mr. Melvin's evidence appeared to have had great weight with the Committee. He was very glad to find their Chamber so well and ably represented as it was, and that their views and those of Mr. Melvin had considerable weight. He noticed, for example, that Mr. Melvin enforced strongly the necessity of uniformity of action in regard to cattle plague and cattle disease matters. He did not know that they could be better placed for adding an instance of the necessity of this uniformity of action than they happened to be at that moment, situated as they were in the county town of Perth. He happened to be a member of the Forfarshire local authority, and he could assure the meeting that they had experienced the greatest difficulty in carrying out matters connected with Forfarshire, simply on account of the action which the burgh of Perth took in regard to cattle plague. With the county of Perth they had no fault to find, as their regulations were much the same as prevailed in Forfarshire; but the burgh of Perth kept itself open, he might say, to all the world; and as the county did not close the burgh off, the Forfarshire local authority were under the necessity of closing off Perthshire, to the great detriment and inconvenience of farmers, especially those on the frontier parts of the county. That was an instance in point, and another member of the local authority present would bear him out in what he had said. Two or three burghs maintained their own course, and kept open while the county was fighting to keep out disease, whilst the other two took the same view as the county; whereas, had there been the same uniformity of action recommended by Mr. Melvin they would have been saved the immense trouble they had experienced. He would now refer to a part of the Committee's recommendations which he thought appeared to be somewhat dangerous. At a time did not permit of his reading the whole of the recommendation, he would content himself with reading the following clause:—"That in any case of pleuro-pneumonia or foot-and-mouth disease breaking out, the Privy Council shall have power to fix the limits of the district which is to be treated as infected." The word "district" in the clause quoted was confusing, as it might mean a pretty large radius of country, and might end in great inconvenience and hardship to most stockowners, were a large district to be pronounced infected because foot-and-mouth disease or pleuro-pneumonia had been found on a farm. He demurred to anything like that, and Mr. Melvin said it would admit of explanation. He was of opinion that the clause should be made to read:—"In any case of pleuro-pneumonia or foot-and-mouth disease breaking out, the Privy Council shall have power to fix the limits of the places which are to be treated as infected." That would save them as stockowners, and would make the clause more satisfactory; but he left it for the Chamber to take a practical view of the matter. Then as to the restrictions in regard to the landing of Irish cattle, he thought Mr. Melvin put that admirably before the Committee, though it was not so explicitly entered in the report he held in his hand as he could have wished. A great deal of their disease had, from time to time, arisen from the fact that their Irish store cattle were necessarily exposed to disease by having to pass through Glasgow, and being laid in the lairs there for a night or two. They would observe how carefully this was watched and guarded against in London; yet Glasgow, second in importance to London, was of great importance to stockowners, and disease was as likely to be caught there as in the case of a store animal entered in the lairs in London. He thought the clause in regard to this should be altered to the effect that none of these animals should be allowed to enter the lairs of fat cattle markets.

The resolution having been unanimously adopted, The CHAIRMAN thanked the Chamber for the compliment which had been paid him. Regarding the evidence he had given before the Committee, he must frankly tell them that all he did in the matter was to submit in as clear and practical a

form as possible the views of the Chamber. Going to a meeting of the Committee after it had sat for six weeks, three days in each week, and four hours every day, and after having examined all and sundry from England, and got to a certain extent tired out with the line of examination, he saw it was necessary to reconstruct his evidence, in order to represent as far as possible all the views he had to submit for consideration. He might state that the groundwork of his evidence had been the admirable memorial which was drawn originally by Mr. Gaudet, and thereafter altered to a slight extent by the directors. That gave him solid ground to stand on, and enabled him to face any cross-examination to which he was subjected. As all the various opinions were represented in the Chamber, it was necessary to be prepared to meet all the different views which the members present chose to take. However, the accurate way in which the questions were put enabled him, to a certain extent, satisfactorily to do this. There was one very obvious line of examination carried out, and that was, to make it appear that the restrictions which were being urged were directly in the face of free trade, and on that ground should be opposed. He could hardly take that view of the matter, because holding the opinion that the diseases of which they complained—cattle plague, pleuro-pneumonia, and foot-and-mouth disease—were not self-produced or naturally produced in this country, but were foreign diseases which were brought here with animals from other countries, it occurred to him that this removed them out of the line of the arguments in favour of free trade. They would, for example, never think of allowing vessels wherein yellow fever or Asiatic cholera were known to exist to land their passengers in this country without some time elapsing to admit of removal of disease from the passengers affected, when clear bills of health would be given. If they applied the same principle to cattle—and he thought they were entitled to do so—then the question came to be, if those individuals who import cattle here in ships were compelled to keep such ships away from the docks in quarantine, the expense would be such as to involve the complete prevention of cattle being brought here at all. In these circumstances, the most merciful and most business-like plan was, if possible, to prevent the spread of infectious diseases all over the country, by having the cattle slaughtered at the port of debarkation, and thus preventing their flocks and herds from being infected. He was quite aware, however, that there would be considerable difficulty in getting the recommendations of the Committee carried out. Several meetings had already been held by the importers; and from their tone and temper it was evident that the importers were determined to do all they possibly could to have the same privilege of spreading cattle over the country as they had hitherto enjoyed. He thought the Chamber was doing right in endeavouring to oppose such action. The question of the prevention of disease by quarantine was also before the Committee. This was, however, a method which he was not prepared to assent to. At Leith, for instance, there was actually no prevention at all. All their own flocks and herds were subject to continual supervision, but the cattle landed from abroad at Leith were put in a shed, and within twelve hours were allowed to be spread all over the country. They were all aware that pleuro-pneumonia might be latent for two or three months, and foot-and-mouth disease might be latent for a good many days, and the run from Holland to this country, or even from Hamburg, often occupied not more than two days. The consequence was that these cattle, exposed to all the annoyances of the voyage, got excited, and when they were put into sheds, this excitement was kept up. The animals being gathered together in yards, it was a difficult matter for a veterinary surgeon to examine them in their natural state; and in this way he believed cattle had been allowed to pass into the country containing the seeds of disease, and so infected other districts. In his evidence about Irish store cattle he had endeavoured to show as clearly as possible that all towns should be carefully avoided by these cattle, and that they should be taken to some quiet port, and landed by rail direct to the markets throughout the country. This he thought was a very important matter, considering the large numbers of Irish store cattle sent over here. At a recent meeting of the Royal Agricultural Society of Ireland it was stated that last year Ireland sent to England and Scotland cattle to the value of £13,000,000. That was a large sum to go into the pockets of Irishmen, and he thought they could not object to being subjected to the same rules regarding

disease which were in force here. The whole question of the importation of meat was one of those questions that should be fully and fairly considered, and if he might be allowed to occupy their time for a little, he would say a few words on the matter. Last year they imported about £20,000,000 worth of animal food. Of that, £7,000,000 had to be set down as the value of the live animals imported, and the remainder for American beef and other salted and prepared provisions. Well, of course, they required an immense quantity of food in addition to what they produced in this country. As the people of this country encouraged the introduction of slaughtered food or dead meat, they extended the radius from which they could obtain food. The discovery of the process by which meat could be brought over from America had enabled the public to obtain a great quantity of meat from America. This was a trade which he believed was only just beginning. The resources of America were such that they would ultimately be able to send over still larger quantities of meat. It was true there was at present some depression felt in that country, but they had only to consider the vast extent of territory there to convince them that America was able to send large supplies of cattle. Then if the time came, as he had no doubt it would, when it would be possible to bring slaughtered meat from Australia, another large source of supply would be opened up, and an immense quantity of meat might be brought to this country. Eight or nine years ago, at a meeting of the Highland Society, held soon after his return from New Zealand, the question came up for consideration as to the effect of a preserved meat trade on the home markets. He then stated that he did not look upon the introduction of such meat as involving any serious consequences to the British farmer, because in that form it was not popular, and not likely to be, owing to the fact that at the high price which its production involved, it would not pay to bring it over. But with the refrigerator process, by which slaughtered meat can be brought from America in an entire state, it would be a very different matter, because that was such an immense quantity to send. Ten years ago they had about 4,000,000 of cattle in Australasia, including Australia and New Zealand, and about 40,000,000 of sheep. Now there were about 7,000,000 of cattle and 70,000,000 of sheep, the population not exceeding 2½ millions. There they had about three oxen for each human being, and somewhere about 30 sheep, which indicated an enormous quantity of butcher meat. In this country, including Ireland, there were somewhere about 10,000,000 of cattle and about 30,000,000 of sheep, with a population of some thirty-two millions. From Australia, where there was an extraordinary supply (which he believed was much superior in quality to that of the United States), they could bring a continuous supply of meat, as they were well able to produce it. Taking everything into account, he believed they could sell meat at from 2½d. to 3d. per lb. wholesale, leaving a margin of about 3d. per lb. for expense of carriage to enable it to be sold here at 6d. He thought the consumers, in their own interest, ought rather to encourage such a trade, and they as agriculturists were entitled—seeing they were brought into competition with all these countries—to have their flocks and herds protected against disease; and by slaughtering at the port of debarkation, they afforded inventors every inducement to perfect their process as much as they could in order to bring dead meat from those countries where it abounded and where it was cheap.

Mr. BETHUNE seconded the motion.

Mr. DINGWALL, Ramornie, Fifeshire, was inclined to differ from what had been said regarding slaughter at the port of debarkation. He had a strong feeling that this was not enough to save them from the effects of foreign disease. They could never be altogether safe unless they insisted that all store cattle brought to this country from the Continent of Europe should be slaughtered at the port of embarkation.

The motion was agreed to.

THE GAME LAWS.—The Secretary read the following resolution, which was to have been moved by Mr. Shepherd, Glegghornie:—"Mr. M'Lagan's Bill, as passed into law, being of no benefit to practical agriculture, but, on the contrary, raises rabbits into the game list, the Chamber resolves to urge members of Parliament to introduce a measure in next session of Parliament abolishing the Game Laws, at least giving the occupant the power of protecting his crops from injury by ground game, and to petition both Houses of Parliament in favour of such a measure when introduced."

Mr. SHEPHERD said he had heard it stated that, through the influence of the Duke of Argyll, the clause of assessment formerly contained in Mr. McLagan's Bill had been removed. It looked as if the Duke could not touch anything connected with the agriculture of the country without injuring it. He numbered him among the Liberals, but he seemed to be a leader among the Conservatives in regard to all his own privileges. If there was any one industry which deserved to be kept free from injury by their own laws it was the industry of agriculture. Nothing could be more evident than that the tenantry should have the power of protecting their own crops, and he would lay it down as a principle that unless this were allowed, their trade was a ridiculous trade. They should be allowed to protect their own growing crops; otherwise, if they allowed as the game law did, indefinite interference with their industry, they, in fact, by law established a principle that according to the will of any landlord might lead to the ruin of his tenants. This subject had been often before the Chamber, and they were all familiar with it, though of late years it had fallen into abeyance in some degree, because the tenants as a class were unwilling to be warring on this question with the landlords. Still the feelings of that Chamber were unaltered from what they were at the beginning. Mr. McLagan had recently introduced a Bill into Parliament, but like all their other friends in Parliament he had allowed himself to be talked away altogether, and his Bill was now of no value. The Bill of Sir Alexander Gordon remained, he believed, unchanged, and the Chamber last year petitioned in favour of it, and it would not have been improper to continue that petition instead of simply asking for the abolition of the Game Laws, as it would be well to keep to an attainable end. However, he had no desire to see a division, and he was perfectly willing to petition that the game laws be entirely abolished.

After some discussion it was decided to instruct the Directors to take into consideration Mr. McLagan's Bill at their next meeting.

THE EDUCATION ACT.—The SECRETARY read a memorial which had been prepared by the Directors on this subject, objecting to the method of the present assessment, and asking that power should be given to the Board of Education in Scotland to take the necessary steps to secure that the standard of education hitherto existing in parochial schools shall be maintained, or in some other way to secure to the people the educational advantages formerly enjoyed in the parochial schools of Scotland, without compelling them to seek it at greater expense than many of them can afford in university towns.

Mr. MACKNIGHT moved: "That this Chamber approves of the memorial and the Directors acting, and remits to the Directors to watch over the subject, and to take further action in the same direction as regards all rural schools."

Mr. GOODLET seconded the motion, which was carried.

MR. BARCLAY'S SECURITY FOR IMPROVEMENTS BILL.—The Directors reported that they were satisfied with the honesty of Mr. Barclay's Bill as being one of simple justice between man and man, and recommended the Chamber to urge the re-introduction of it next session, and they suggested a number of detailed alterations which they intend to ask Mr. Barclay to embody in his Bill.

Mr. BETHUNE moved: "That the Chamber approves of the report and remits to the Directors to communicate with the author of the Bill, in view of the re-introduction of the measure next session, with the Chamber's suggested amendments thereon."

Mr. NICOL seconded the resolution, which was passed.

THE POOR-LAW AMENDMENT BILL.—The Directors' report on this Bill recommended that no further powers be placed in the hands of the Board of Supervision until it be made an open court.

Mr. MACKNIGHT moved: "That the Chamber approves of the Directors' report, and remits to the Directors to watch legislation on this subject."

The motion was agreed to.

THE DUKE OF ARGYLL ON THE LAND QUESTION.—The SECRETARY reported that the Directors had that forenoon agreed to thank Mr. Goodlet for the pamphlet he had issued in answer to the Duke of Argyll's essay on the land question, to approve of the same, and to recommend the Chamber to publish it.

The CHAIRMAN said he had read with great pleasure Mr.

Goodlet's pamphlet in answer to the Duke of Argyll's essay on the above subject. The pamphlet of Mr. Goodlet was clearly and temperately written, and fairly met the questions raised by the Duke, who had strangely omitted all reference to the law of freedom of contract. Having omitted all reference to this law which was the basis of the contract, the case of his Grace was greatly weakened. The way in which the subject had been treated by Mr. Goodlet justified them in thinking that it was a complete answer to the Duke's arguments, and he had great pleasure in moving "That the thanks of this Chamber be given to Mr. Goodlet for his excellent answer, and that they adopt the recommendation of the Directors to direct the Secretary to have the pamphlet published and circulated to the best advantage."

Mr. MACKNIGHT seconded the motion, stating his belief that the ingenious aim of the Duke was to throw dust in the eyes of the tenantry and public generally, but it had been baffled by Mr. Goodlet's pamphlet, which would be a valuable means of enlightening the public on this question.

After some discussion it was agreed that the Chamber should publish the pamphlet.

MR. J. J. MECCHI AT TIPTREE HALL.

A good type of the ideal British farmer—brawny, hearty, and genial—meets the frequent visitors who drive up to the hospitable doors of Tiptree Hall. For twenty-nine successive years Mr. Mechi had entertained his agricultural friends at his well-known "annual gatherings;" but this year he issued a notice excusing himself from receiving his friends *en masse*, on the ground of advancing age. In a tent on the lawn in front of the mansion as many as two hundred guests have enjoyed the good cheer and the good sayings of the most genial of hosts, after inspecting the crops, the stock, and the premises. At the age of seventy-five it is no wonder that Mr. Mechi gives up those large gatherings which, in a somewhat remote country house, must have occasioned a great deal of labour and anxiety. At the same time, visitors, singly or in small groups, are as freely welcome as ever to view what has been a show-farm for more than thirty years. It is not easy to believe that the hearty active man who walks round the farm with you as briskly as a young one, and who enjoys a good dinner and a good cigar as well as when he was a London alderman, has passed by half a decade the limit of threescore years and ten. But he will tell you that he was born at Blackheath on the 26th of May, 1803; and you have only to come to the conclusion that you have one before you with whom Time has dealt gently, and one who, in spite of reverses that would have embittered a less genial nature, has taken life easily.

Mr. Mechi's father, a native of Bologna, settled in London in the latter part of the last century. John Joseph received the greater part of his education from the late Rev. Mr. Watson, and at the age of seventeen he became clerk to a mercantile firm in the City, and remained with them until 1827, when he opened the business in Leadenhall-street that was to become so well known and successful. For nearly fifty years Mr. Mechi may be said to have been a public man; for long before he attempted to teach men how to farm profitably, he supplied them with the means of shaving comfortably. Mr. Mechi has, very properly, as much pride in his early business life as in his farming occupations, and he will speak as freely of his introduction of commercial specialities as of the branching of agricultural theories. To thousands in all parts of the world, to whom shaving had been torture, Mr. Mechi became a benefactor. After a lengthened period of experimenting upon the best sharpening materials for razors, he hit upon his renowned "magic paste," which, with his famous strops and razors, became quite the rage with the shaving community. The razors were of the best Sheffield steel, and the strops and paste remain to this day unsurpassed in efficiency. So great was their success that when the fashion of wearing beards came in, it diminished Mr. Mechi's income to the extent of £1,600 annually. Thus a great business of a miscellaneous character was developed, and a large establishment was opened in Regent Street, in addition to the one in Leadenhall Street.

By the year 1841 Mr. Mechi had realised a considerable fortune, which he invested in the purchase of four farms. At the time he had no idea of becoming a farmer, and it was almost an accident which induced him to become one. He

had from his youth been fond of his gun and his fishing-rod, and in the pursuit of sport he had made frequent visits to friends, chiefly farmers, in Essex and Suffolk. In the course of these visits he had noticed great differences in farming practice, with correspondingly diverse results. But let Mr. Mechi tell his own tale. In the first letter which he ever published, written to the *Agricultural Gazette* on the 15th of March, 1844, he thus explains his devotion to farming pursuits:

I may be asked, "What can you, as a Londoner, know about farming?" I will answer, "I always loved the beauties of Nature, the pure air of heaven, the sports of the field, and the hospitality of our honest yeomen. I have seen one farmer making a fortune and his next neighbour losing one. I have seen one field all corn, and another nearly all woods. I asked, 'How is this?' inquired into the causes; noted the results; obtained from all the best farmers and all the best agricultural books within my reach every information bearing on agricultural pursuits; practised in my own little garden, on a small scale, a variety of experiments; and, after carefully weighing the evidence, I came to the conclusion that want of drainage, waste of manure, shallow ploughing, and short leases are among the greatest curses to this country; and I, as far as my individual means will permit, am resolved on remedying them."

This, however, does not account for what has above been termed the "accident" which led Mr. Mechi to become a practical farmer. When he purchased Tiptree Hall, he found the land was suffering from the want of draining, and he offered to drain it for his tenant if the latter would pay a small percentage on the outlay. But the man was incredulous as to the benefits of draining, and, in the end, Mr. Mechi bought him out, and entered on the work of improvement at Tiptree Hall on his own account. The present mansion was then built, with some of the excellent farm-promises; the land was drained; miles of fences were knocked down, and hundreds of wretched pollards and other hedgerow trees with them. The soil was not one of the most hopeful to work on, having been more or less recently reclaimed from Tiptree Heath; but by keeping a large quantity of stock, and feeding with purchased cake and other materials, together with draining, chalking, and steam cultivation, the farm was soon made one of the most fruitful in the country, showing a marked superiority to those immediately surrounding it.

Mr. Mechi's first agricultural letter, describing his operations in draining and other improvements, rendered him famous. Landowners and farmers came to see him, and he was soon engaged in a large public and private correspondence. He is properly described as an agricultural preacher, and a preacher who says not only "Do as I say," but "Do as I do" also. Thus the "sayings and doings" of Mr. Mechi were copied together, and formed the fitting title of one of his works. The principal points which he insisted on as essential to good and economical farming may be thus enumerated: The draining; deep cultivation; thin sowing; covered and ventilated stock-yards with paved floors; close folding for sheep; a certain portion of land irrigated with sewage; the absence of hedgerow timber; freedom of cultivation; the use of straw as food for stock; and the use of steam as a motive power. All, or nearly all, these points had been introduced by different agricultural reformers before Mr. Mechi combined them in his practice and became the indefatigable apostle of them all. Over thirty years he has been pounding away on these and kindred topics with more or less effect. Many who at first laughed at the "cockney farmer" learned to imitate him, and others have been warned by his mistakes, whilst profiting by his successes; for Mr. Mechi, like all bold experimenters, has had his failures. He made a mistake in draining with stones below the drain-tiles—an expensive process which no one has ever thought of imitating, and which Mr. Mechi himself does not recommend, although he declares that the drains at Tiptree thus laid are still more clear than any others. But the most costly mistake which the then wealthy land-improver ever made was the laying down of irrigation pipes over his whole farm. Mr. Mechi admits now that he has never seen the interest for this heavy outlay, and that he should have been content with the irrigation of about the twentieth part of his farm, with the object of forcing crops of ryegrass and other fodder for his stock.

In the early days of his agricultural apostleship, Mr. Mechi was subjected to a great deal of dislike, and even to vituperation and threatening, by some of his fellow-farmers, who

thought that, by telling their landlords how much more the land could be made to produce, he was leading up to the raising of rents. Anonymous letters, filled with the vilest of abuse and the direst of threats, came ever and anon to the spirited farmer of Tiptree Hall; and even at his own table Mr. Mechi has more than once been most grossly insulted. His imperturbable good temper, however, rendered him proof against these contemptible demonstrations; the anonymous letters were first laughed over and then put in the fire, and public abuse was answered by public argument. That the tenant-farmers should have been annoyed and alarmed when a London tradesman came down into the country to teach them how to farm, and to declare publicly that the land of England did not produce more than one-half what it might be made to produce, is not surprising. It must be admitted, too, that Mr. Mechi began to teach when he had yet a great deal to learn. On the whole his principles of farming were sound at the first, and he has had one lesson to alter very little. Still it was annoying for farmers of experience thus to be put to school, and landlords did undoubtedly prick up their ears with thoughts of higher rents, especially when Mr. Mechi began to publish his farm balance-sheets. But what the farmers in their annoyance forgot was, that Mr. Mechi insisted as strongly on the duty of the landlord to execute permanent improvements on his land, as on that of the tenant to farm well. To the land-owners he said: "Drain your land; put up good farm buildings; cut down your worthless and wasteful hedgerow timber, especially those wretched pollards; and give your tenants reasonable freedom of cultivation, and fair compensation for unexhausted improvements." To the tenants he said: "Keep plenty of stock; utilise your farm produce as food to the utmost; do not waste your seed by overthick sowing, or your manure by exposure in open yards and hills; keep your land clean; and stir the soil deeply." Both have profited by his lessons, though all are not equally well fitted for all cases. Thin sowing, for instance, on poor soils, or on land subject to certain almost ineradicable weeds, would be a mistake. Even Mr. Mechi himself has never been disposed to sow his famous "peck an acre" on more than a very small portion of his farm, though he has often been able to challenge his visitors to distinguish the patch from the rest of the field, on which a bushel, or five pecks an acre, had been drilled. Covered farmyards are still, unfortunately, the rare exceptions to a general rule, and the ancient muckhill, turned and returned greatly to its waste, is nearly as common as ever. Progress in the agricultural world is slow, though a comparison of things as they were at the beginning and are at the latter part of Mr. Mechi's farming career shows that it is sure. Pollards and hedges are fewer, partly as the result of Mr. Mechi's teachings; less thick, though not very thin, sowing is quite usual; and other practices that the Tiptree Hall farmer was once laughed at for recommending have been commonly adopted. Most pleasing of all to think of, the ill-feeling against Mr. Mechi, on the part of the farmers, has passed away, and he is for the current year the chairman of the London Farmers' Club, the most important association of its kind in the kingdom. At meetings of this club, and at those of other associations in all parts of the country, Mr. Mechi has at various times read valuable agricultural papers, and he has been a constant contributor to the press. Most of his papers, letters, speeches, and notes have been collected in three volumes, which have been published for him by Messrs. Routledge, and which have had a very extensive circulation.

Mr. Mechi has been twice married, first in 1833, and a second time in 1846. By his first marriage he had no children, but by the second he has one son and four daughters. In 1856 he was made Sheriff of London and Middlesex, and in 1858 he was unanimously elected Alderman of the Ward of Lime-street. This position he resigned in 1866, on account of heavy losses consequent upon the winding up of the Unity Bank, for the liabilities of which Mr. Mechi was to a great extent responsible. On his resignation an illuminated address, testifying to his honourable conduct during a long business career and expressing regret at his giving up his office, was presented to him by his brother alderman and the inhabitants of the Lime-street Ward. By the failure of the Unity Bank Mr. Mechi lost £30,000; but he has the pleasure of boasting that his was the only bank that paid all its creditors before closing its doors. This heavy loss com-

pelled Mr. Mechi to reduce his establishment, and—what was perhaps the greatest grief of all—to reduce his farm capital also. Another address, which, like the first mentioned, is to be seen in the drawing-room of Tiptree Hall, is one which commemorates the presentation of an emblematic silver centrepiece, subscribed for by upwards of four hundred of his friends, whose contributions were limited to a guinea each. One of the most useful acts of a useful life was the establishment of the Agricultural Institution, which Mr. Mechi started in 1880, and which last year distributed annuities amounting to nearly £10,000 to destitute farmers, farmers' widows, and farmers' daughters. Of the many public and private expressions of appreciation which he has received, he prizes none more than a memorandum written by his late friend Mr. George Moore, as follows:—"I have valued my honest straightforward friend Mechi for a quarter of a century, and wish I had the same amiable temper and disinterested nature. Few men would have dashed the cup from their lips when he could have been Lord Mayor of London, because he thought he was not sufficiently rich to maintain the dignity of the position. I had him down to Cumberland, and invited eighty farmers to meet him at White Hall; and he delighted them all. His example got me into farming, which has been the plague of my life."

Mr. Mechi still carries on his London business, but spends the greater part of his time in the country. When at Tiptree he rises early, dines in the middle of the day, and lives as simply as his agricultural neighbours. His time is occupied with farming, receiving numerous visitors, and writing, which last item includes a large private correspondence. His conversation is spiced with humour and varied with anecdotes, of which his store is considerable. As a public speaker he is fluent and illustrative, and what would be a fault with most men—the tendency to diverge into purely personal history and experience—is agreeably and instructively egotistical in one who has so much that is interesting and important to tell about himself and his doings.—*The World*.

THE LORD LIEUTENANT ON IRISH AGRICULTURE.

At the banquet in connection with the recent meeting of the Royal Agricultural Society at Galway, the Duke of Marlborough said:—

It had been his good fortune lately to visit the North province of Ireland, and there he had an opportunity of witnessing the great strides of commercial and manufacturing industry and activity. It might be well that he should refer to the few statistics of the agriculture of the country. The returns for the current year showed an increase of 2,000 acres under wheat. He was not sure that this was altogether a healthy condition, for he believed it might be attributed in a great degree to the very fine harvest of wheat last year. There had been an increase of the quantity under barley of 5,000 acres, and a somewhat peculiar increase in cabbages. There had been an increase of 4,500 acres of rape and vetches, but the most extraordinary increase was that of 64,000 acres in meadow clover. It was evident that this was an increase arising from the conviction, and the very fair and proper conviction, that the rearing and feeding of cattle was one of the chief elements of Irish agriculture, that the nature of the soil is suited for the production of grass, and that the particular features of the climate are also well suited to the production of that particular crop upon which the feeding of cattle depends. There had also been an increase of 15,000 acres of oats. There was also a singular increase in the breadth under potatoes. He did not think the diminution in this crop that had taken place in recently preceding years was to be deplored. That diminution from 1867 to 1877 had been 121,000 acres. The decrease in wheat for the same decennial period was 142,000 acres; of oats, 17,000; flax, 121,000; while in barley there had been an increase of 49,000 acres—and in this latter item they had an evidence of the industry now prevailing, namely, that large industry with which so respected a name as that of Guinness was associated. He would not advance any opposing argument to the argument that the conversion of the land out of tillage into grass was an unpatriotic act, but it was generally found that things found their own level in agriculture as in any other employment, and it was impossible to prescribe any rigid way in which the fertility of the soil was to be developed. There

were 121,000 fewer cattle, and 19,000 fewer sheep, but they had exported during the year £13,105,000 worth of live stock, so that if the amount of stock had decreased they had this reflection to fall back upon, that the large sum of £13,000,000 had been paid into the hands of the farmers of the country. They find, however, there were in the country at present 3,996,000 cattle, being more by 860,000 than there were two years ago. Pigs also were more by 633,000. Is sheep there was no extraordinary decrease. Taking all these facts into consideration, he thought that, as regards the agricultural debit and credit account, the country was to be congratulated, and there was no cause for alarm or despondency. There had been great progress made under provisions of the Land Act, enabling some farmers to purchase their holdings, and there was a great advance in the condition of the labouring class. There was also a large increase in the Joint-Stock and Post-office Savings Banks' deposits. His Grace then referred to the subjects of drainage and education, and congratulated the company that in respect of law and order the country was greatly improving.

FARMS AND RENTS.—The English farmer cannot complain in these latter days that he suffers from a lack of advice. Everybody is busy advising him, and not a few mingle a good deal of pity with their advice. "Poor fellow!" they say, "if he does not take care he will soon be polished off the face of the earth. Everything is against him, the seasons, rents, landlords, American beef, Colorado beetles, bad trade, foreign competition, rise in wages, and a dozen other evils, which are all known of, but which we will not describe too minutely. If the farmer has everything against him, and nothing for him, what is to become of him? He can't go on for ever—as Tennyson's Brook does—with matters as they are now. He must soon reach the end of his capital, and then what will become of him? For a farmer who has lost all he has is the world is in a worse plight than a dragoon in battle who has had a horse shot under him." Now we all know, pretty well, that commiseration of this sort, pitying wonder, stupid compassion, has been plentifully bestowed on the farmer. And perhaps if we look round as we can easily guess why this is the case. First of all, everyone has had it forced on his or her notice that farmers are in a pitiable plight. Next, farmers, as their manner is, are not much given to hiding their grief under a bushel. They don't suffer in silence. If they have something to grumble at, as we all have at times, they don't do their grumbling with bated breath. They speak out, and speak plainly, and speak frequently. Sometimes it is even said that for reasons best known to themselves they make the most and the worst of whatever particular calamity they are called upon to face. They don't do their grumbling in secret. They take all men into their confidence, and whether at market ordinaries or at agricultural dinners, they are only too ready to disburden their minds of what is pressing on them most painfully. But when we make every allowance for dyspeptic views of matters, and for exaggerated notions of evils which may never come, there still remains a fair share of probability that the English farmer of the present day has good grounds for strong complaints, and good cause to fear the future which is immediately before him. Grave journalists, grave students of the principles of agricultural success, grave farm bailiffs, grave landlords, grave rectors of parishes, are pretty much of one mind, when they talk at all, that the English farmer's present condition is not the most satisfactory of conditions. And the landlords are told to look to themselves also, for the worse off the farmers become, the worse will it be for rents. If the farmers are ruined or exhausted, or deliberately turn their backs on agriculture, what will the landlords be able to do? They cannot farm all the land which may soon be unoccupied. Many of them cannot afford to reduce rents. Scores of estates are eaten into by mortgages. The fall of rents is becoming a plain fact which landlords will be compelled to deal with. And if rents fall, many a landlord will know a good many sleepless nights. If there is no competition for farms at present rents, how, or by what process, can rents be kept up? Farmers do not rent to pay more than they can afford to pay, merely for the pleasure of keeping landlords comfortable and easy-minded. They would prefer to seeing their landlords pinched to seeing themselves pinched. And they are not at all eager to embark in a business, such as farming is now, which means all loss and no profit.—*Torchester Gazette*.

AGRICULTURAL SOCIETIES.

BEDFORDSHIRE.

MEETING AT BEDFORD.

The annual Show of this Association was held on the 19th July. The weather proved delightfully fine, and there was a numerous attendance of visitors. The Show was in almost all respects a remarkable success. The only drawback was the fact that there was but a short and poor entry of sheep for a county so famous for its sheep as Bedfordshire, the principal exhibits being Oxford Down shearing rams, which were remarkably good throughout. The show of cart horses generally was exceedingly good, and in the hunters' class the high reputation of this meeting was thoroughly sustained. Mr. George Street's yearling colt, out of Cardiff Lass, of "Royal" celebrity, by Stokes' Champion, attracted considerable attention. There were some excellent pigs shown, and we noticed that the judges left out in the cold a sow which took first prize at Huntingdon on Wednesday. This year there was a very fine collection of agricultural implements, although if more space had been available it would have been occupied.

PRIZE LIST.

JUDGES.—CART HORSES: Mr. Thos. Plowright, Pinchbeck, Lincoln; Mr. W. Thompson, Thorpe, Colchester; Mr. C. Swoeder, William, Hitchin. NAG HORSES: Mr. John Tabor, Boeking Hall, Braintree; Mr. F. Gordon, Wansford, Peterboro'; Mr. R. Russell, Farningham, Dartford. CATTLE: Mr. M. Reynolds, Warden; Mr. Joseph Robinson, Clifton Pasture, Newport Pagnell; Mr. G. Baker, Luton. SHEEP: Pigs, and Dogs: Mr. A. F. Milton Druce, Eynsham, Oxford; Mr. Joseph Bennett, Southcourt, Linslade. BUTTER: Mr. W. Madam, Biggleswade.

HORSES.

Cart Stallions.—Exhibited at Bedford on Saturday, April 7th, 1877. First prize, £20, "Young Champion," chestnut, 8 years, the property of Mr. Thomas Stokes, Caldecote, Uppingham; second, £5, "Young Champion of England," the property of the Executors of the late Mr. F. Horn, Fulloxhill.

Yearling cart colt.—First prize, £5, G. Street, Maulden; second, £3, Mrs. Street, Cople.

Yearling cart filly.—First prize, £5, R. Prew, Sharnbrook; second, £3, R. Horrell, Oakley.

Two-year-old cart gelding.—First prize, £6, F. Allwood, Walsworth; second, £4, F. Allwood.

Two-year-old cart filly.—First prize, £6, Miss Trevor, Tring; second, £4, R. Prew, Sharnbrook.

Pair of cart horses for agricultural purposes.—First prize, £15, E. Humphries, Pershore; second, £10, C. Howard, Biddenham; third, £5, J. and F. Howard, Clapham.

Mare and foal for agricultural purposes.—First prize, £10, J. Gilbert, Sibbertoft; second, £5, J. Frole, Elstow; third, C. Howard, Biddenham.

Cart foal.—First prize, £3, J. Gilbert, Sibbertoft. Cart mare or gelding of any age.—First prize, £10, E. Humphries, Pershore.

Four-year-old horse or mare for hunting purposes, bred in the county of Bedford.—First prize, £10 10s., W. Purser, Cople.

Hunter not exceeding six years old last spring, up to 13 stone, being the *bona fide* property of a tenant farmer or his son residing within the limits of the Oakley Hunt.—First prize, £10, W. Whitehead, Wollaston.

Hunter not exceeding six years old last spring, up to 13 stone, being the *bona fide* property of a tenant farmer or his son residing within the limits of the Cambridgeshire Hunt.—First prize, £10, C. C. Hayward, Southill.

Hackney of any age.—First prize, £10, J. Hall, Bythorn.

Hackney of any age, not exceeding 15 hands 1 in., suitable for general purposes.—First prize, £5, J. H. Tuke, Hitchin.

Cob above 13 and under 15 hands.—First prize, £5, H. H. Green, Felmersham; second, £3, J. Hall, Cross Hall, St. Neot's.

Pony not exceeding 13 hands.—First prize, cup value 5 gs., H. J. Hopkins, Northampton.

Mare in foal, or with foal at foot, suitable for breeding hunters, the foal to be by a thoroughbred horse.—First prize H. Purser, Willington; second £5, G. Woodward, Warden.

Harness horse not under 15 hands 1 in., to be shown in single harness.—First prize, £10, R. Horrell, Oakley; second, £5, W. T. Wood, Bedford.

Cob not exceeding 15 hands, to be shown in single harness.—First prize, £10, J. Hall, Bythorn.

Harness pony, not exceeding 13 hands, to be shown in single harness.—First prize, £5, J. Tilley, Northampton.

Horse of any age that jumps his fences in the best manner.—First prize, £10, L. White, Goldington; second, £5, J. A. Peacock, Ravensden.

Cob or pony, not exceeding 14 hands, that jumps his fences in the best manner.—First prize, £5, H. F. Holland, Amptill.

Silver cup, value £21, for the best animal in any of the Nag Horse Classes, being the property of a tenant farmer residing in Bedfordshire, or within 20 miles of the town of Bedford.—J. Hall, Cross Hall, St. Neot's.

CATTLE.

Bull above two and under five years old.—First prize, £10, Marquis of Exeter, Burleigh Park; second, £5, J. N. Beasley, Bampton, Northampton.

Bull above one and under two years old.—First prize, £10, Duke of Manchester, Kimbolton; second, £5, R. Marsh, Little Olfy.

Cow of any age.—First prize, £10, T. Kingsley, Boarscroft; second, £5, J. Sharp, Broughton.

Cow or heifer in calf or in milk, not exceeding three years old.—First prize, £5, J. A. Mumford, Brill House, Thame; second, £3, T. Kingsley, Boarscroft.

Heifer, not exceeding two years old.—First prize, £5, R. Marsh, Little Olfy; second, £3, G. A. Ashby, Naseby Wooley's, Rugby.

Three animals of the Shorthorn breed, including a bull, a cow in calf or in milk, and a heifer not less than 12 months old.—First prize, £25, Marquis of Exeter; second, £10, J. A. Mumford, Brill House, Thame.

Dairy cow in milk or in calf.—First prize, £5, T. Kingsley, Boarscroft; second, £3, G. Underwood, Little Gaddesden.

Dairy cow, bred in the county.—First prize, £5, M. Norman, Blunham.

Channel Islands cow.—First prize, £5, no award.

Fat ox.—First prize, £5, J. Rogers, Chellington.

Fat cow or heifer.—First prize, £5, R. Marsh, Little Olfy.

A silver cup, value £5 5s., for the best fat ox, cow, or heifer, fed in the county of Bedford, G. Street, Maulden.

SHEEP.

Long-woolled shearing ram.—First prize, £5, H. J. Hopkins, Moulton Grange Farm; second, £2 10s., Charles Sell, Basingbourne.

Short-woolled shearing ram.—First prize, £5, J. Treadwell, Upper Winchendon; second, £2 10s., J. Treadwell.

Pen of five long-woolled shearing ewes.—First prize, £5, C. Sell, Basingbourne; second, £3, J. Wootton, Cardington.

Pen of five Down or cross-bred shearing ewes.—First prize, £5, J. Treadwell; second, £2, no award.

Pen of five breeding ewes, of any age or breed, which shall have suckled lambs up to the first day of June, 1877.—First prize, £5, G. Street, Maulden; second, £2, no award.

Pen of three fat long-woolled shearing wethers.—First prize, £5, C. Sell, Basingbourne; second, £3, H. J. Hopkins.

Pen of three fat Down or cross-bred shearing wethers.—First prize, £5, J. Walker, Goldington; second, £2 10s., no award.

Pen of five long-woolled ewe lambs.—First prize, £3, F. Allwood, Walsworth.

Pen of five Down or cross-bred ewe lambs.—First prize, £3, J. H. Blandell, Luton; second, £1 10s., W. Purser, Cople.

Pen of five long-woolled wether lambs.—No exhibition.

Pen of five Down or cross-bred wether lambs.—First prize, £3, J. Morris, Amptill; second, J. H. Blandell, Luton.

PIGS.

Boar intended for use.—First prize, £3, J. and F. Howard, Clapham; second, £2, S. Spencer, Holywell.

Sow with pigs.—First prize, £3, W. Batt, Maulden; second, £2, S. Spencer, Holywell.

In-pig sow.—First prize, £3, S. Spencer, Holywell; second, £2, J. Brown, Marston.

Three fat pigs.—Prize, £3, T. W. Grant, Langford.

BUTTER.

For the best three pounds of butter.—First prize, G. Street, Maulden; second, W. Leaberry, Hulcote; third, J. A. Elkington, Bedford; fourth, G. Cook, Flitwick; fifth, Mrs. Street, Cople.—*Bedfordshire Times*.

CAMBRIDGESHIRE AND ISLE OF ELY.

The ancient city of Ely has this year been the selected place for the holding of the annual show of the Cambridgeshire and Isle of Ely Agricultural Society, and July the 25th and 26th were the days fixed for holding it. Whilst there are in adjoining counties, and even in our own, suggestions for the amalgamation of several of the county Shows into one, like that of the Bath and Royal Counties Show in the West of England, the Cambridgeshire and Isle of Ely Society has gone on successfully, and is probably stronger and more prosperous now than at any previous period of its fourteen years' existence. The County and Isle alternately receive the Society, and this year it—for the third time—visited Ely, and was received by the inhabitants generally with that liberality and heartiness which tended greatly to secure success. There was a very good display of horses in nearly all the classes, but especially amongst cart horses and entire horses for agricultural purposes. There was also a fine show of mares and foals. In the cattle classes Mr. Griffin, of Werrington, had almost a monopoly in some classes. There was about an average show of sheep, the Southdowns being very good. Pigs were a much better show than usual, several of the prize animals being absolutely porcine leviathans. The root show was the smallest we remember to have seen at this Show, there being only one lot of mangels exhibited.

PRIZE LIST.

HORSES.

FOR AGRICULTURAL PURPOSES.

Stallion.—First prize, £10, G. Wayman, Girtton (Golden Ball); second, £5, H. Cockle, Hilrow (Honest Tom).

Entire three-year-old colt.—First prize, £10, W. Little, Littleport (Marquis); second, £5, J. Linton, Westwick Hall.

Entire two-year-old colt.—First prize, £10, F. Street, Somersham Park (British Wonder, late Thumper); second, £5, G. Jones, Downham Market (Leviathan).

Cart mare, not under four years old.—First prize, £8, C. Beart, Stow Bardolph (Lioness); second, £4, W. H. Cropley, Upware, Wicken.

Mare and foal.—First prize, £10, C. Golden, Benwick (Empress); second, £5, J. Baya, Chatteris (Brisk).

Two-year-old cart gelding.—First prize, £5, W. Pate, Ely; second, £3, C. Daintree, Fenton.

Two-year-old filly.—First prize, E. Whittome, Ramsey; second, £4, J. Martin, Littleport.

Yearling colt.—First prize, £5, R. Beldam, Witchford (Black Prince); second, £3, C. Beart, Stow Bardolph (Waxwork).

Yearling filly.—First prize, £5, G. Palmer, Barway (Smiler); second, £3, J. Morton, Wisbech.

Three-year-old cart gelding, foaled since 1st January, 1874.—Prize, £8, C. and S. Free, Madingley.

Three-year-old cart mare, foaled since 1st January, 1874.—First prize, £8, J. Martin; second, £4, J. Martin.

Cart gelding, not under four years old.—Prize, £5, C. and S. Free.

Team of four cart horses, mares or geldings (not in harness).—Prize, £20, G. Jones, Stow, Downham Market.

Pair of cart horses, mares or geldings, or mare and gelding, the property of a tenant farmer.—Prize, £10, J. Beldam, Bluntisham.

Pair of two-year-old cart fillies, the property of and bred by exhibitor.—Prize, cup, value £5 5s., J. Martin.

Pair of two-year-old cart geldings, the property of and bred by the exhibitor.—Prize, cup, value £5 5s., J. Callack, Littleport.

Cart foal.—First prize, £5, W. Skelton, Manea; second, £3, J. C. Humphrey, Northdelph.

Foal by Hercules, Ajax, Hector, or The Trojan.—Prize, cup, value £4 4s., G. Morton, South Hilgay.

Yearling, either entire, gelding, or filly, by Hercules.—Prize, £6 6s., R. Beldam.

Foal by King Tom (open to all England).—Prize, cup, value £5 5s., E. Few, Willingham.

Entire horse for agricultural purposes (open to all England).—Prize, cup, value £20, G. Wayman, Girtton (Golden Ball).

Best cart mare or gelding in the yard, having taken a first prize in any class.—Prize, £10, C. Beart.

RIDING AND COACHING HORSES.

Stallion best calculated to get weight-carrying hunters.—First prize, £15, H. Jones, Littleport, Lydon; second, £10, T. Granger, Haddenham (Young Pretender).

Hackney stallion.—First prize, £10, J. Howell, Holmes (Rideman); second, £5, W. Flanders, Mildenhall (Confidence).

Mare or gelding, under five years, adapted for hunting purposes.—First prize, £5, A. R. Mason, Waterbeach; second, £3, T. Benton, Earith.

Hackney mare or gelding.—First prize, £5, H. Wayman, Downham Market; second, £3, R. C. Cook, Livermere.

Mare which is best calculated to breed a hunter.—First prize, £8, J. Home, Ely; second, £4, G. S. Hall, Ely.

Weight-carrying cob.—Prize, £5, E. Holmes, Ely.

Hunter of any age.—Prize, £10, T. Benton, Earith.

Hunter, not exceeding six years.—Prize, Cup, value £7 7s., T. Benton, Earith.

Riding cob, mare, or gelding.—Prize, Cup, value £10 10s., W. R. Cockle, Hilrow.

Hackney mare, with foal at foot, the property of a resident in the county or isle.—First prize, £5, J. Sindall, Ely; second, £3, A. and B. Hall, Ely.

Mare or gelding, showing the best trotting action in saddle or harness.—First prize, £10 10s., H. Wayman, Downham Market; second, £5, T. Benton, Earith.

Driving mare or gelding, to be driven in harness.—Prize, A cup, value £5 5s., T. Wallis, Witchford.

Saddle pony, the property of a resident in the county or isle.—First prize, £5, D. Camp, Haddenham; second, £2, D. Camps.

Entire cob.—Prize, £5 5s., W. Flanders, Mildenhall.

Horse or mare that shall jump in the best form.—First prize, C. Ambrose, Stuntney Hall; second, £3, G. S. Hall.

Pony that shall jump the fences in the best form.—No entry.

The Consolation Prizes for jumping were won on Thursday by G. S. Hall, (first), and T. Benton (second), with horses ridden by Mrs. Williamson and Miss King.

CATTLE.

Best bull of any age.—Prize £10, C. W. Griffin, Werrington.

Bull, not exceeding two years.—First prize, £10, C. W. Griffin; second, £5, G. E. Daintree, Fenton.

Bull, not exceeding one year.—First prize, £6, R. K. Porter, Mepal; second, £3, J. Morton, Stow, Downham Market.

Cow in calf or in milk.—First prize, £6, T. Gannell, Milton; second, £3, J. Morton.

Heifer, not exceeding three years, in calf or in milk.—First prize, £6, C. W. Griffin; second, J. R. Chaplin, Halstead.

Heifer, not exceeding two years.—First prize, £6, C. W. Griffin; second, £3, R. K. Porter.

Heifer, not exceeding one year.—First prize, £4, C. W. Griffin; second, £3, W. Little, Littleport.

Cow or heifer for breeding purposes, in calf or in milk, not under two years.—Cup, value £5 5s., T. Gannell.

Heifer for breeding purposes, not exceeding two years.—Cup, value £5 5s., C. W. Griffin.

Cow in calf or milk, not eligible to be entered in the Herd-book.—First prize, cup, value £5 5s., W. Johnson, Walpole, St. Peter's; second, £3, W. Pate, Ely.

Pair of fat bullocks, fed by exhibitor.—No entry.

Pair of grazing steers or heifers.—Prize £5, J. Martin, Littleport.

Bull, cow, and offspring (open to all England).—Prize £10, C. Ambrose, Sountney Hall.

SHEEP.

Shearling Leicester or Lincoln ram.—First prize, £5, T. Gannell; second, C. Sell, Basingbourn.

Five Leicester or Lincoln ram lambs.—First prize, £5, T. Gannell; second, £3, Captain Catling, Wisbech.

Five Leicester or Lincoln ewes.—First prize, £5, Captain Catling; second, G. E. Daintree, Fenton.

Five shearling Leicester or Lincoln ewes.—First prize, £5, C. Sell, Basingbourn; second, T. Gannell.

Five Leicester or Lincoln ewe lambs.—First prize, T. Gannell; second, Captain Catling.

Shearling Southdown ram.—First prize, £5, Lord Braybrooke, Audley End; second, £3, Lord Braybrooke.

Five Southdown ram lambs.—First prize, £5, F. N. Jonas, Chrishall Grange; second, £5, G. Jonas, Ickleton.

Five Southdown ewes.—First prize, £5, F. M. Jonas, Chrishall Grange; second, £3, Lord Braybrooke.

Five shearling Southdown ewes.—First prize, £5, F. M. Jonas; second, £3, G. Jonas, Ickleton.

Five Southdown ewe lambs.—First prize, £5, F. M. Jonas, Chrishall Grange; second, £3, G. Jonas, Ickleton.

Shearling short-woolled ram (not Southdown).—First prize, £5, Mr. F. Street, Somersham-park, Oxfordshire; second, £3, H. Lambert, Abington-park, Hampshire Down.

Five short-woolled ram lambs (not Southdowns).—First prize, £5, Mr. Lambert, Abington-park, Hampshire Down; second, £3, F. Ellis, Chesterton.

Pen of five short-woolled ewes (not Southdowns).—First prize, H. Lambert, Abington-park; second, £3, G. Cooke, Horseheath-park.

Five shearling short-woolled ewes (not Southdowns).—First prize, £5, H. Lambert, Abington-park, Hampshire Down; second, £3, G. Cooke, Horseheath-park, pure Shropshire.

Five short-woolled ewe lambs (not Southdowns).—First prize, £5, H. Lambert, Abington-park, Hampshire Down; second, £3, A. M. Robinson, Milton.

Five cross-bred lambs.—First prize, £4, J. Taylor, Soham; second, £3, H. Lambert, Abington-park, Hampshire Down.

Southdown ram.—Prize, £5 5s., Lord Braybrooke.

Five shearling Lincoln ewes.—Cup, value £5 5s., C. Sell, Basingbourn.

PIGS.

Boar, large breed.—First prize, £4, Mr. Burgess, Lyna; second, £3, C. Daintree, Fenton.

Boar, small breed.—First prize, £4, Mr. Spencer, Holywell; second, £3, Mr. Spencer.

Sow, large breed.—First prize, £4, Mr. Spencer; second, £2, Mr. Spencer.

Sow, small breed.—First prize, £4, Mr. Spencer; second, £2, Mr. Spencer.

Three yelts, large breed, not six months.—£3, Mr. Spencer.

Three yelts, small breed, not six months.—£3, Mr. Spencer.—*Cambridge Independent*

CLECKHEATON.

The ninth annual exhibition of the Cleckheaton and District Agricultural Society was held on July 28. The entries were classed as follows:—Cattle 61, horses 151, pigs 44. Amongst the prizes in the cattle department were no less than five silver cups. Two of these were carried off by Mr. T. Atkinson, Unsworth, with a shorthorn bull, over two years old, and a shorthorn cow; two by Mr. H. Fawcett, Otley, with a shorthorn bull under two years old, and a two-year-old heifer; and one by Mr. J. Scott, Womersley, with a cow for dairy purposes. The horses in the various classes mustered the prizes offered for the best groomed draught mare or gelding; and so even were their merits strongly, and some very promising animals were paraded before the judges. Nine splendid animals competed for that the judges experienced some difficulty in coming to their decision. Ultimately they awarded the first prize to Messrs.

W. Atkinson and Son, Cleckheaton; the second to Mr. Holt Merchant Fields; and the third and fourth prizes to Mr. R. Crawshaw, Heckmondwike. A silver cup of the value of £10 10s. for the best roadster mare or gelding not more than 15½ hands high was secured by Charles H., the property of Mr. J. Robinson, of Hull, whilst a similar prize for the best mare or gelding exceeding 14 hands, to be shown in harness and trap, was awarded to an animal belonging to Mr. R. Martin, Flaxton. Hunters and leapers though not numerous, were of good quality and high breed, the cars offered falling to the lot of Messrs. A. J. Brown, Pontefract; H. Crossley, Adwalton; and W. Wright, Halifax. There was a good show of pigs, poultry, pigeons, and rabbits, a large proportion of the exhibits being commended by the judges. Sporting and non-sporting dogs formed a prominent feature of the exhibition, the winners being produced by Messrs. J. Waddington, Brighouse, and P. Cavanagh, Leeds.

THE HIGHLAND AND AGRICULTURAL.

Though not in the aggregate number of entries, but yet in the over-all merit of the live stock exhibited, the Highland Society's Show, which was held in the West Meadows of Edinburgh, compares favourably with former Shows. In some of the departments, indeed, the merit is perceptibly higher. The display of Clydesdales, of border Leicester sheep, as well as Cheviot and blackfaced, of the Angus or Aberdeen polled, and the implements was never better. And yet, it must be observed that the entries of the last Edinburgh Show, which was held in the West Meadows eight years ago, were about 800 more; but a walk along the live-stock sheds, the stables, and the implement stands was sufficient to strike one very impressively as to the advance made since then in the general "bring-out" of the animals, and in the mechanism of the machines and implements, both in principle and workmanship. In 1868 the total entries of live-stock amounted to 1,985 as compared with 1,615 this year, but it is interesting to notice how this increase was mainly made up. Eight years ago the entries in these departments were, cattle, 310; horses, 212; sheep, 704; swine, 42; poultry, 717; this year, cattle, 350; horses, 340; sheep, 515; swine, 40; poultry, 370; so that while there has been a fair increase in cattle, a third more in horses, and nearly the same in swine, there has been a third less in sheep, and a half less in poultry. The decrease in sheep and poultry alone represent upwards of 500 entries. There are about 100 less entries this year than at the Aberdeen Show last year, and the decrease has taken place principally in the cattle and swine, and poultry; and the decrease would have been very much more had there not been a material increase in sheep and horses. Cattle at Aberdeen always turn out in strong force; and this is not to be wondered at considering the large scale on which rearing and feeding is conducted throughout the country. The display of implements, the entries of which are 2,714, is the largest the Society has had. The whole extent of the yard this year is about 35 acres, which appears to be barely sufficient room for the requirements of the exhibition, especially in the vicinity of a large city, where so many thousands flock to see it. The places at which the Shows usually meets with the greatest financial success are Glasgow and Edinburgh; and this year's Show in this respect is not far behind that held in the Scottish western metropolis two years ago. The weather, altogether, since the opening of the Show, has been dry, sunny, and warm, chequered only by an occasional passing shower.

THE SHORTHORNS.

Although the display of Shorthorns was not signalised by the presence of any outstandingly "crack" animal, yet there was sufficient general and individual merit to pronounce it equal to any exhibition here of the breed. Not the least interesting and curious feature about the

Shorthorn department this year is the complete reversion, in more than one instance of the Royal decisions at Liverpool. Mr. Linton's Sir Arthur Ingram, the premium-henour, and fifty guinea cup bull at Liverpool has been put second to Mr. Brown's Pomeer, which only got commended there. A good deal of controversy as to the accuracy of the decision of course has taken place, but whether or not the reverses of Sir Arthur were owing to his trip north having made him look less in bloom, than at Liverpool, it is sufficient to say that the northern judges were not wanting in material on which to found their decision. Sir Arthur, no doubt, could not be approached in length of quarter, depth of brisket, greatness of fore-arm, but he lacked the general wealth of flesh and thickness, the well-sprung rib, and pleasant handling of Pomeer, notwithstanding his rather inferior hind-quarter. Both have been well-known honour-takers at the national shows since their calf-hood, and their honours need not be enlarged upon here; but one circumstance is worthy of notice, that Pomeer, Rosarie, and Duke of Aosta, sire of these two, and belonging to Mr. Browne, all stood respectively at the head of the yearling two-year-old and aged bull classes at the Glasgow Show of the Highland Society two years ago. In the tussle for the next two positions, a decision of the Royal Northern Show judges at Aberdeen recently was reversed in placing Mr. Bruce's Earl of March before Duke of Chamberburgh. Both are good bulls, but the Duke, although a little deficient in girth, has perhaps a better top, broader loins, and finer quality than the Earl. The two-year-old class was an excellent one; and here, if a royal decision was not reversed, the animal was "taken down a peg." Mr. Willis's first-Royal light roan, Rear Admiral, was placed second to quite a new-comer, which had been a prize-taker at the Northern Sale Mart. Rear Admiral's rare style and gait, and fine quality, was not thought sufficient to eclipse the great size, the splendid coat, the magnificent rib and shoulder, of the bull which came first, namely, Master Tree, belonging to Mr. Charles Stirling Hame Drummond Moray, of Abercairny. But while the former might be said to want size and coat, the latter lacked levelness on the top, especially at the tail-head, which the judges had to give weight. Master Tree, we believe, has been sold to Mr. Ross Dingwall, at a high figure. With Vice-Admiral, Mr. Willis, in the yearling class, had more success. His bull, which got first at the Royal, was placed here before the champion yearling of the Birmingham Show last spring, from Dochfour. The latter is rather heiferish-looking in the head, but he has a fine touch, and abundance of evenly laid on flesh, although lacking the sweetness and general style of Mr. Willis's bull. Mr. Crisp and Mr. R. Bruce got the two remaining honours with promising animals. The display of Shorthorns was good, although it has been seen better in point of general merit. Mr. R. Bruce's Miss Fox had no difficulty in coming first with her beautiful front, shoulders, and frame. Mr. Bruce's second cow, Royal Rose, had not the general symmetry of his first, although it was perhaps a little longer in the hind-quarter, and was quite as fine in quality. Her Majesty's Carolina 5th, a three-year-old roan, who was second at the Aberdeen Show last year in the two-year-old class, came in for third ticket. Her hind-quarters are not at all attractive, but her frame forward has beautiful shapes. Wallflower, a thickly-fleshed broadly-joined cow from Dalkeith Park, was awarded the highly commended ticket; and the commended to a good useful-looking cow from Mertoun. The two-year-old heifers were not a large class, but represented fair merit. A fashionably-coloured long-horned heifer, Lady Ellen, but with only fair neck and hind-quarters, belonging to Sir Thomas Hepburn, got first, while a roan, the property of Major Ramsay, of Barra, scarcely so fleshy nor so

large, but as sweet and more level in the top, secured the second ticket. Thomas Lambert, Haydon-bridge, was third with a lengthy, stylish red and white. An unusually large number of promising yearling heifers entered the ring for honours. Mr. Linton came in first with a daughter of Sir Arthur Ingram, the daughter of the second aged bull, with great size and good shapes; while Mr. William Langhorne, Haydon-bridge, was placed second with Diadem, a heifer with a grand coat, and fine shape and substance. The Duke of Richmond and Gordon secured the third and highly-commended tickets with a promising pair of animals who took first at Aberdeen recently. Mr. Tweedie, Denchrie, a young enterprising breeder, was deservedly given the commended ticket for a level, well-fed heifer, which had never been shown before.

POLLED ANGUS OR ABERDEEN.

Although there has been once or twice a larger display of polled Angus or Aberdeen cattle, it is beyond question that there never was so close competition, so much nearness in individual merit, nor, of course, so much difficulty experienced in judging the various sections. The first-prize aged bull of the Glasgow Show was forward, and in virtue of that he was, as usual, awarded the medium gold medal. He belongs to the Marquis of Huntley, is long and stylish, and still doing good service at Aboyne. Young Viscount, the Aberdeen warrior, was also awarded the gold medal for being forward, and still had a good chance, had he been allowed to compete, of taking a leading prize. He is the property of Viscount Macduff, M.P., and has taken three first prizes in succession at the Highland Society's Shows. The aged bulls were an excellent class. The lengthy, substantial, level bull Logie the Laird, belonging to Lieut.-Colonel George Arthur Ferguson, of Pitfour, was first, although it must be said he was lighter in the flank than we could have wished. He was bred by the famous breeder Mr. Bowie, Mains of Kelley, and a well-fleshed, though shorter, and narrower cropped bull, Prince Albert II., from Tullochallina, which was first at Aberdeen recently, was awarded the second honour. The three remaining tickets were awarded to wealthily-fleshed symmetrical bulls from Duffhouse, Aboyne, and Drumlin. Eight two-year-olds were then judged, when Sir Thomas Gladstone got first prize with an animal of great substance, front, and fine head, but with only fair underline, and unevenly covered rib. Indeed it was the opinion of not a few that Mr. Hannay's bull, Sir Wilfred, which was placed second, was the more deserving of the first premium of the two, with less marked liveliness and thickness of flesh. Sir Wilfred was first as a yearling at the Highland Society Show. A handsome shapely bull from Ballindalloch secured the third honour, and Mr. Mc. Combie, of Easter Skene, and Mr. Robertson, Burnside, deservedly followed with promising animals. In a small but good class of yearling bulls Mr. Hannay's Warrior was placed first. He is level, and long, and was first at the Royal Northern Show at Aberdeen, Mr. Mc. Combie, of Tillyfour, and Mr. Taylor, Huntly, were the winners immediately following with shapely well-bred animals. Lord Macduff's cow, Innes, which was first at Aberdeen last year, and first in the two-year-old heifer class, was forward for the gold medal. The keenest competition prevailed amongst the cows, where an unpopular decision seemed to have been given in placing Mr. Mc. Combie's (of Tillyfour), Alice in the first position; and the judges, it may be remarked, took more time in putting this cow, and Sir George Macpherson Grant's Eva, which got the second honour, into position than in the judging of the remaining sections. Mr. McCombie's cow has great length of hind-quarters, and levelness of flesh, and has carried off many honours in the north. Sir George Macpherson Grant's Eva, although

not so long in frame or leg, has grand front, loin, and fairly level top. She was second in the cow classes at the Highland Society last year. Jewel and Violet, the property of Viscount Macduff, M.P., and Jean II., belonging to Mr. Scott, Easter Tulloch, animals possessing more than ordinary merit, were the winners of the remaining honours. Ten two-year-old heifers, generally plump and level, entered the ring for honours; but here the judges, it would seem, made a very unpopular decision in putting Mr. Reed's Blossom of the Baads in first position. She has had a calf recently, and is certainly not in bloom, and the judges may have taken that into account. She has, moreover, not at all attractive hind-quarters, while her spring of rib and shape of shoulder is only fair. The Marquis of Huntley's Dorinda, got second honour. She has beautiful hind-quarters, and many other admirable points which could be mentioned, but she is a trifle slack in the back. A thick beast, of fine quality, from Duffhouse, got third, while Blackbird, of Croisie, from the same place, and Gaiety, from Drumin, got the remaining honours deservedly. Twelve yearling bulls of fair merit entered the ring for adjudication, but they puzzled the judges a good deal. The bull for first position lay between Mr. McCombie's first prize yearling at the Aberdeen Royal Northern Show, level and stylish, and Mr. Skinner's (Drumin) heifer, with substance and grandly laid shoulders; but the palm was ultimately given to the Drumin heifer. Mr. McCombie's heifer has more gaiety and style; but in the hind-quarters and in one or two minor points the latter might be considered the better bull. Promising bulls from Ballindalloch, Duffhouse, and Easter Skene, take the remaining honours.

The Galloways made an excellent show in point of merit, although it was not large. In aged bulls Mr. John Wedholme, Carlisle, came to the front with a particularly thick, deep-framed animal. A Tarbreoch bull heads the class in the two-year-olds; while the Duke of Buccleuch and Mr. Cunningham (Tarbreoch) have forwarded former prize-winning cows, in splendid condition, for the medium gold medal. A finely-ribbed, nobly-breasted cow, from Dalkeith Park, came first in the cow class, while Mr. Cunningham takes a similar position in the two-year-old heifers, with a stylish, well-bred animal. A massive, grandly-girthed yearling belonging to the Duke of Buccleuch tops his class. The display was good for a summer show, this time of the season being not at all favourable to the real exhibition of their merits. The Duke of Buccleuch, Mr. Geo. Carson, Dumfriesshire, Mr. John Rennie, Talkirk, and Mr. John Michael Seafeld, old prize-winners, secured their former prominent position in this breed. The shaggy breed, native to Highland mountains, were forward in comparatively large numbers, and the prize-winning animals from Duntulm, Blair Castle, Blair Athole, Taymouth Castle, and Blair Drummond, attracted, as they invariably do, a great deal of attention. The display of fat stock was not large, but there were comprised in it a few plump well-brought-out animals, those from Blair Drummond, Castle Grant, Galloway House, Tillyfour, J. and W. Martin, Aberdeen, Invergordon, Grange, Dunfermline, were specially so. Sir David Baird had an Alderney bull forward which was awarded a commended ticket, and which was the object of much attraction. The report of Sheep and Pigs next week.

PRIZE LIST.

JUDGES.—CATTLE, Shorthorns: E. Cruickshank, Inverurie; J. Wood, Ripon; A. Young, Dunblane. Polled Angus or Aberdeen: Hon. C. Carnegie, Brechin; T. Ferguson, Coupar Angus; W. Walker, Mossat. Galloways: J. Hannay, Banff; J. Little, Longtown. Ayrshires: A. Allan, Ayr; H. Kirkwood, Killermont, Maryhill, Glasgow; R. M. Aitler, Rothsay. Highlands: J. Macfarlan, Gare-

lochhead; J. J. Robertson, Strontian. Fat Stock: C. Smith, Prestonkirk; and J. Wilson, Edinburgh.

HORSES.—Draught stallions and entire colts: A. Buchanan, Milngavie; J. Cunningham, Dalbeattie; R. M'Kean, Lumloch, Bishopbriggs. Draught mares, fillies, and geldings: S. Jack, Coldstream; W. Findlay, Bishopbriggs; J. Macadam, Drymen. Hunters, roadsters, ponies, and extra horses: The Earl of Haddington; J. Jardine, Lockerbie; J. W. J. Patterson, Langholm.

SHEEP.—Cheviots: T. Elliot, Selkirk; W. Grieve, Hawick; W. Mitchell, Dornoch. Black-faced: J. Craig, Craigdarroch, Muirkirk; T. Howison, Errol; J. Johnstone, Biggar. Border Leicesters: L. C. Chrisp, Alnwick; J. Lees, Gifford; C. Lyall, Montrose. Leicester, Cotswolds, Lincoln, and Shropshires: W. Ford, Dalkeith; and R. C. Yeoman, Mark-by-the-Sea, Yorks.

Pigs.—J. Deane, Dalkieth; and J. Fisher, Crosshill, Yorks.

POULTRY.—D. Stratton, Edinburgh; and R. Tebbay, Preston.

WOOL.—S. Adam, Leith; G. Torrence, Dunee.

CATTLE.

SHORTHORNS.

Bulls calved before 1st January, 1875.—First prize, A. H. Browne, Doxford; second, W. Linton, York; third, J. Bruce, Fochabers.

Bulls calved after 1st January, 1875.—First prize, C. S. H. Drummond, Moray of Abercraigh, Chrieff; second, T. Willis, jun., Bedale; third, Duke of Northumberland.

Bulls calved after 1st January, 1876.—First prize, T. Willis, jun.; second, E. Ballie, Dochfour, Inverness; third, A. H. Browne, Doxford.

First prize cows at former shows.—Exhibited for Medium Gold Medal, Aberdeen, 1876, when the property of the present exhibitor.—W. A. Mitchell, Auchnagathie.

Cows of any age.—First and second prizes, R. Bruce, Northallerton; third, Her Majesty the Queen.

Heifers calved after 1st January, 1875.—First prize, Sir T. B. Hepburn, Bart., Smeaton; second, Major Ramsay, Aberdeen; third, T. Lambert, Haydon Bridge.

Heifer calved after 1st January, 1876.—First prize, W. Linton, York; second, W. Langhorn, Haydon Bridge; third, The Duke of Richmond and Gordon.

FOLDED ANGUS OR ABERDEEN.

First prize bulls at former shows.—Exhibited for Medium Gold Medal, Glasgow, 1875, when the property of the present exhibitor, The Marquis of Huntly; Aberdeen, 1876, when the property of the Earl of Fife, K.T.—Viscount Macduff, M.P.

Bulls calved before 1st January, 1875.—First prize, Lieut.-Colonel G. A. Ferguson, Pitfour; second, G. Gordon, Dafftown; third, Viscount Macduff, M.P.

Bulls calved after 1st January, 1875.—First prize, Sir T. Gladstone Fasque, Bart.; second, J. Hannay, Banff; third, Sir G. M. Grant, Bart.

Bulls calved after 1st January, 1876.—First prize, J. Hannay; second, W. M'Combie, Easter Skene; third, W. J. Taylor, Huntly.

First prize cows at former shows, exhibited for medium-gold medal; Aberdeen, 1876, when the property of the Earl of Fife, K.T.—Prize, Viscount Macduff, M.P.

Cows of any age.—First prize, W. M'Combie; second, Sir G. M. Grant, Bart.; third, Viscount Macduff, M.P.

Heifers calved after 1st January, 1875.—First prize, G. Reid, Aberdeen; second, Marquis of Huntly; third, Viscount Macduff, M.P.

Heifers calved after 1st January, 1876.—First prize, W. M. Skinner, Drumin; second, W. M'Combie; third, Sir G. M. Grant, Bart.

GALLOWAY.

First prize bulls at former shows, exhibited for medium-gold medal; Aberdeen, 1876, when the property of the present exhibitor.—Prize, J. Graham, Parcelstown, Longtown.

Bulls calved before 1st January, 1875.—First prize, W. and J. Shennan, Kirkcudbright; second, Duke of Buccleuch; third, J. J. Paterson, Lockerbie.

Bulls calved after 1st January, 1875.—First prize, J. Milligan, Carlisle; second, J. Cunningham, Tarbreoch; third, G. Graham.

Bulls calved after 1st January, 1876.—First prize, J. Cunningham; second, J. Thomson, Crockettford.

First prize cows at former shows, exhibited for medium-

gold medal; Glasgow, 1875, when the property of the present exhibitor, J. Cunningham; Aberdeen, 1876, when the property of the present exhibitor.—Prize, Duke of Buccleuch.

Cows of any age.—First and second prizes, Duke of Buccleuch; third, J. Cunningham.

Heifers calved after 1st January, 1875.—First prize, J. Cunningham; second and third, Duke of Buccleuch.

Heifers calved after 1st January, 1876.—First prize, Duke of Buccleuch; second, J. Cunningham; third, Duke of Buccleuch.

AYRSHIRE.

First prize bulls at former shows, exhibited for medium gold medal; Glasgow, 1875, when the property of the present exhibitor.—Prize, W. Smith, Chanlockfoot, Penpont.

Bulls calved before 1st January, 1875.—First prize, Duke of Buccleuch; second, R. Wilson, Kilbarchan; third, D. C. Williamson, Sanguhar.

Bulls calved after 1st January, 1875.—First prize, J. Rennie, Falkirk; second, G. Corson, Thornhill, Dumfriesshire; third, the Duke of Buccleuch. Highly commended: J. Orr, Mosshead, New Kilpatrick.

Bulls calved after the 1st January, 1876.—First prize, D. C. Williamson, Sanguhar; second, W. Hunter, Abingdon; third, R. Wardrop, Old Camnock.

First prize cows at former shows, exhibited for Medium Gold Medal.—Glasgow, 1875, when in milk and the property of the present exhibitor.—The Duke of Buccleuch; Aberdeen, 1876, when in calf, and the property of J. M. Martin, jr. of Auchendennan.—The Duke of Buccleuch; Aberdeen, 1876, when in milk, and the property of the present exhibitor.—A. B. Foulds, Clerkland, Stewarton.

Cows in milk, of any age.—First prize, the Duke of Buccleuch and Queensberry; second, J. Meikle, Bathgate; third, the Duke of Buccleuch.

Cows in calf, of any age, or heifers in calf, calved before the 1st January, 1875.—First prize, J. Meikle; second and third, the Duke of Buccleuch.

Heifer calved after 1st January, 1875.—First prize, the Duke of Buccleuch and Queensberry; second, R. Stark, Falkirk; third, the Duke of Buccleuch.

Heifers calved after 1st January, 1876.—First and second prizes, the Duke of Buccleuch; third, W. Hunter, Craighead.

HIGHLAND.

First prize bulls at former shows, exhibited for Medium Gold Medal.—Glasgow, 1875, when the property of J. Campbell, Ormaig, Kilmartin.—The Master of Blantyre; Aberdeen, 1876, when the property of the present exhibitor.—J. Grant, Inverlaidnan, Carr Bridge.

Bulls calved before 1st January, 1874.—Prize, J. Stewart, Portree.

Bulls calved after 1st January, 1874.—First prize, J. Stewart, Duntulm; second, J. Stewart, Callander; third, the Earl of Bracadane.

Bulls calved after 1st January, 1875.—First prize, J. Duncan, Benmore; second, trustees of the late R. Peter, Aberfeldy; third, the Duke of Athole.

First prize cows at former shows, exhibited for Medium Gold Medal.—Glasgow, 1875, when the property of the present exhibitor.—J. Stewart, Bowncastle; Aberdeen, 1876, when the property of the present exhibitor.—The Duke of Athole.

Cows of any age.—First prize, the Duke of Athole; second, J. Stewart, Duntulm; third, J. Stewart, Bochartle.

Heifers calved after 1st January, 1874.—First and third prizes, the Earl of Seafield; second, the Duke of Athole.

Heifers calved after 1st January, 1875.—First prize, J. Stewart, Duntulm; second, the Duke of Athole; third, the Earl of Seafield.

HORSES.

FOR AGRICULTURAL PURPOSES.

Stallions foaled before 1st January, 1874.—First prize, D. Riddell, Paisley; second, P. Crawford, Strathblane; third, D. Riddell; fourth, A. Clark, Bri ge of Weir.

Entire colts foaled after 1st January, 1874.—First prize, A. Weir, East Kilbride; second, D. Riddell, Blackhall; third, J. Houldsworth, Coltness; fourth, D. Riddell.

Entire colts foaled after 1st January, 1875.—First prize, J. Thompson, Kelso; second, J. Brown, Kilwinning; third P. Crawford, Dumgoyack; fourth, A. Blackwood, Inchinnan.

Entire colts foaled after 1st January 1876.—First prize, D. Riddell, Blackhall; second, R. Brewster, Kilmalcolm; third,

Sir W. Stirling Maxwell, Bart.; fourth, P. Crawford, Dumgoyack.

Mares with foal at foot, foaled before 1st January, 1874.—First prize, W. Henderson, Linlithgow; second, J. Thompson, Kelso; third, J. Hendry, Coatbridge; fourth, L. Drew.

First prize mares at former shows—exhibited for Medium Gold Medal, Aberdeen 1876, when, with foal at foot, and the property of A. Buchanan, Mains.—D. Buchanan, New Kilpatrick.

Mares in foal, foaled before 1st January, 1874.—First prize, Sir W. Stirling Maxwell, Bart.; second, L. Drew; third, D. Buchanan, Garrodden Mains; fourth, W. Brook, Barra, Yoker.

Fillics, foaled after 1st January, 1874.—First prize, W. J. Houldsworth, Coltness; second, A. Baird, Urie; third, A. Smith, Stevenson Mains; fourth, J. Meikle, Seafield.

Fillics, foaled after 1st January 1875.—First prize, J. M. Martin, Balloch; second, J. Young, Cambuslang; third, J. Waddell, Inch; fourth, L. Drew.

Fillics, foaled after 1st January 1876.—First prize, the Earl of Strathmore; second and third, A. Baird, Urie; fourth, L. Drew.

Draught geldings, foaled before 1st January, 1874.—First prize, R. Stark, Camelon; second, A. Aikenhead, Pollockshaw; third, J. Smith, Ballindalloch.

Draught geldings, foaled after 1st January, 1874.—First prize, D. Robertson, Paisley; second, G. Brothers, Larbert.

HUNTERS AND ROADSTERS.

Brood mares (with foal at foot) suitable for field.—First prize, J. W. Hodgson, Flat, Carlisle; second, H. Elliot, Hawick; third, W. J. Houldsworth, Coltness.

Yield mares or geldings suitable for field, heavy weight, foaled before 1st January, 1873.—First prize, J. Shaw, Dundee; second, J. Leslie, Bughall; third, R. L. Paterson, Dalkeith.

Yield mares or geldings suitable for field, light weight foaled before 1st January, 1873.—First prize, T. McDougall, Penicuik; second, D. Kippen, Busby; third, T. Foster, sea. Beal.

Mares or geldings suitable for field, foaled after 1st January 1873.—First prize, J. Moffat, Carlisle; second, J. Dryburgh, Cupar-Fife; third, T. Foster, jun.

Mares or geldings suitable for field, foaled after 1st January 1874.—First prize, S. Jack, Coldstream; second, G. Stoddart, Newton Mearns; third, R. Pace, Ormiston Mains.

Mares or geldings, suitable for carriage, foaled before 1st January, 1873.—First prize, W. Ford, Dalkeith; second, R. Younger, Edinburgh; third, J. S. Brown, Dunfermline.

Mares or geldings, suitable as hackneys or roadsters, between 14 and 15 hands high.—First prize, J. Houldsworth, Coltness; second, T. Lawrie, Gorebridge; third, G. Black, Bathgate.

Stallions, mares, or geldings, for leaping.—First prize, J. Black, Howgate; second, J. Jamieson, Edinburgh; third, H. Welsh, Edinburgh.

PONIES.

First prize stallions at former shows, exhibited for Medium Gold Medal, Aberdeen, 1876, when the property of the present exhibitor.—The Duke of Athole.

Highland stallions, 14½ hands and under.—A. Baird, of Urie.

Highland mares or geldings between 13 and 14½ hands high.—First prize, A. Naismith, Edinburgh; second, B. O'Connell, Edinburgh; third, W. Torrance, Bathgate.

First prize mares at former shows, exhibited for Medium Gold Medal—Aberdeen, 1876, when the property of the present exhibitor—A. Baird, Urie.

Mares or geldings, between 12½ and 14 hands high.—First prize, P. Melrose, Eddlestone; second, J. Aitchison, Edinburgh; third, D. Robertson, Paisley.

Mares or geldings, under 12½ hands high.—First prize, A. Tweedie, Ha ddington; second, J. Syme, Edinburgh; third, D. Johnstone, Roslin.

SHEEP.

CHEVIOT.

Tups, three shear and upwards.—First and third prizes, T. Welsh, Moffat.

Tups, two shear.—First prize, J. Brydon, Jan., Holm of Dalquhairn; second, J. Brydon, Moffat; third, J. A. Johnstone, Moffat.

Shearling tups.—First prize, H. Brydon, Selkirk; second, J. Brydon, Kinnellhead; third, T. Elliot, Hindhope.

Pens of five ewes above one shear.—First prize, J. Archibald, Glegelt; second, J. Brydon, Kinnelhead; third, T. Elliot, Hindhope.

Pens of five shearing ewes or gimmers.—First prize, J. Archibald, Glegelt; second, T. Elliot, Hindhope; third, J. Brydon, Kinnelhead.

Wool.—Prize, H. Brydon.

Lambs.—First prize, J. Brydon; second, T. Elliot.

BLACKFACED.

Tups, three shear and upwards.—First prize, D. Foyer, Leenostown; second, J. Fleming, Strathaven; third, D. Foyer.

Tups, two shear.—First prize, J. Archibald; second and third, T. Aitken, Balerno.

Shearing tups.—First prize, J. Watson, Biggar; second, C. Howatson, Machline; J. Greenshields, Lesmahagow.

Pens of five ewes above one shear.—First prize, J. J. Currie, Gorbidge; second, J. Archibald; third, A. Coutborough Milngavie.

Lambs.—First prize, J. Archibald; second, J. J. Currie.

Pens of five shearing ewes or gimmers.—First prize, P. Melrose; second, T. Aitken; third, D. Foyer.

Wool.—First prize, J. Y. Currie.

BORDER LEICESTER.

Tups above one shear.—First prize, W. Purves, Thurso; second, J. Clark, Cockburnspath; third, J. Ainslie, Edinburgh.

Shearing tups, J. Clark, Oldhamstocks Mains, second, T. Ferguson, Compar-Angus; third, A. Smith, Gifford.

Pens of five ewes above one shear.—First prize, J. Nisbet, Lumden, Danse; second, R. Tweedie, Catterick; third, Earl of Dalhousie.

Pen of five shearing ewes or gimmers.—First prize, J. Clarke; second, Marquis of Tweeddale; third, J. Melvin, Ratho.

LEICESTER.

Tups of any age.—First and second prize, E. Sutherland, Burghhead; third, T. Smith, Dundee.

Pen of five ewes of any age, or gimmers.—First and second prize, E. Sutherland; third, T. Smith.

Wool.—First prize, J. Ainslie.

COTSWOLD.

Tups of any age.—First, second, and third prize, F. Gibson, Dalkeith.

Pens of five ewes of any age, or gimmers.—First and second prize, F. Gibson.

LINCOLN.

Tups of any age.—First, second, and third prize, T. Wilkin, Dumfries, two shear.

Pen of five ewes of any age, or gimmers.—First and second prize, T. Wilkin.

SHROPSHIRE.

Tups of any age.—First and second prizes, Earl of Zetland; third, Lord Chesham.

Pens of five ewes of any age, or gimmers.—First prize, Lord Chesham; second and third, F. Gibson.

EXTRA SECTIONS.

Pens of five Cheviot wethers, not above three shear.—First prize, Sir G. G. Montgomery, Bart.; second, T. Irving, Dumfries.

Pens of five blackfaced wethers, not above four shear.—First prize, C. S. Plummer, Selkirk; second, A. Munro, Invergordon.

Pens of five wether hoggs of any cross, not above one shear.—Prize, A. R. Haig, Haddington.

PIGS.

Boars, large breed.—First prize, Earl of Ellesmere; second, B. O'Connell, Edinburgh.

Sow, large breed.—First prize, Earl of Ellesmere; second, B. O'Connell.

Pens of three pigs not above eight months old, large breed.—First and second prizes, Earl of Ellesmere.

Boars, black or Berkshire breed.—First prize, J. Duncan, Greenock; second, A. P. Hope, Dunbar; third, Lord Chesham.

Sows, black or Berkshire breed.—First prize, Earl of Ellesmere; second, A. Naismith, Edinburgh; third, J. Duncan.

Pens of three pigs not above eight months old, black or Berkshire breed.—Prize, A. P. Hope.

Boars, small breed.—First prize, Earl of Ellesmere; second,

Earl of Wemyss and March; third, Hon. G. R. Vernon, Kilmarnock.

Sows, small breed.—First prize, Earl of Ellesmere; second, Hon. G. R. Vernon; third, Earl of Wemyss and March.

Pens of three pigs not above eight months old, small breed.—Prize, Earl of Ellesmere.

LINCOLNSHIRE.

MEETING AT BOSTON.

CATTLE.

SHORTHORNS.

It is not often that so good a Showyard is to be found quite close to a town as was available to the Lincolnshire Society for the meeting at Boston on July 26th, and two following days. Roomy, and nicely shaded by fine trees, it was all that could be desired, whilst it was so near to the heart of the town that one might have thrown a stone from one side of it and hit the famous tower, sometimes irreverently termed "Boston Stamp," but not the less admired as one of the finest church towers in the country.

THE HORSES.

At the Lincolnshire meetings one expects to see good horses, and last week the visitors were certainly not disappointed. Whether they could see all the horses, however, depended upon the time they were able to spend at the Show; for as the judging on Wednesday was going on in three rings at the same time, it was impossible to see all out in one day, and those animals which could not be seen out were in many cases not to be seen at all, on account of being locked up in their stables with double doors, both fastened. This is an extraordinary arrangement, and one with which we feel particularly aggrieved, as it prevented us from seeing much of the hunters and hacks after the judging of the agricultural horses and Shorthorns was over. We were assured that there was an excellent show of these classes of horses, and what little we saw of them confirmed this opinion, which the names of the entries, indeed, might almost have sufficed to endorse. However, our business was more with the horses for agricultural and other heavy work, and the judging of these took up a great part of the day. The order of judging was not the order of the catalogue, the draught stallions of any age being judged last. They were a wonderfully good lot, attracted no doubt by the liberal first prize of £100, given on condition that the winner shall serve not less than fifty mares in Lincolnshire during the season of 1878. There were sixteen entries, all of which were in the ring. Two or three old favourites, missed this year at the Royal, were amongst them, notably the winner of the first prize, Le Bon, who now looks better than ever before. This is just the right stamp of horse for agricultural purposes, and one that will fulfil the conditions on which he takes his prize to the great advantage of the county. He has short legs, plenty of bone and substance, and moves as a cart horse should move. He had, however, some worthy competitors, and the judges were a long time deciding upon the few amongst so many good ones which should stand to the fore as possible prize-takers. Mr. Brooks' Honest Tom the 2nd was placed in the second place, and it seemed for a long time doubtful whether he would not be first, so good a representative is he of a famous family. Mr. Hack's Stanton, a good three-year-old bay, was commended. Mr. Key, of Market Rasen, showed Young Napoleon, a black four-year-old, which was greatly admired, and amongst the other notable competitors were Mr. Greenham's Brown Stout, Mr. Champion's Ploughboy, and the grand old Scotchman, The Banker, shown by Mr. Byron, of Sleaford. In the class for two-year-old draught stallions there were nine present out of eleven entries. These, again, were a very good lot, and

required careful judging. The first honour went to Mr. Waltham's handsome chestnut by Mr. Drakard's Matchless, who has not yet apparently been christened. He has plenty of bone, and moves remarkably well. Mr. Burges's Matchless took the second place, and Mr. Ealand's Young Topman was the reserved animal. The latter horse has hardly bone enough, but for quality was not surpassed, if equalled, by any present, whilst for action he was unapproached. Mr. Balderstone's Bang-up is a powerful horse, and a rare sort to cross with mares, like the Suffolks, that have none too much bone; but something which we did not notice apparently rendered the judges indifferent to him. Mr. Campbell's Renard is a useful-looking farmers' horse, but his hocks are not quite so clean as they should be. The year-old entire colts were a fair lot. Mr. Beart took the first prize for Norfolk, as he did at Liverpool, with his chestnut Wonder, which, however, is a Lincolnshire-bred colt. Mr. Cooke's colt, which looks like making a good one, was placed second. In Class 37, for mares for breeding draught horses, each of which had a foal at foot or had bred one during the season, there was a noble show. Of fifteen entries there was not a single absentee. The Stud Company's great prize-taker Royal Duchess was placed first, her style being unapproached, though she was not the best stamp of mare present as a producer of farm horses, for which purpose we should prefer Mr. Nidler's Princess of Wales, a grand five-year-old mare, with a capital foal at her side. Mr. Mayfield took the third prize for a big chestnut mare, which we did not fancy so well as several others present. No one, however, could complain that the judges went all for one point of excellence in making their awards in this class; for the first prize was given for style, the second for usefulness and substance, and the third for size. Messrs. Cafferata and Co., of Newark, showed a handsome mare, Beauty, and Mr. Burkitt had a noble grey, a good mover, but walking too widely for a perfect plough mare. There were several other capital mares, which looked like coming right out of work, instead of having been got up for show. Indeed, taking the show of horses as a whole, we have never seen one in which mere fat was so little relied on by the exhibitors. The foals seemed to us, on the whole, to be hardly worthy of their sires and dams; but many of them were late ones and rather poor as well. There were a few very good ones, the second prize mare's foal, already honoured with a name, Princess Olga, being a grand one. The show of cart geldings was a very small one, only three out of eight entries putting in an appearance. In Class 56, for two-year-old fillies, there were ten present out of an entry of fourteen. Mr. Paddison's big grey filly was placed first, a decision which somewhat surprised us, and Mr. Miller's Fatima, a filly of much better style, took the second place. Mr. Winter showed a nice brown filly and Mr. Epton a good black one. Mr. Little's "Brisk" also deserves notice. The one-year-old cart fillies, of which only four appeared, do not call for any remark, and the pairs of draught horses made up the worst class ever seen in Lincolnshire, or, perhaps, any other county. There was not a good pair amongst them.

THE SHORTHORNS.

The Shorthorns were not nearly as numerous as they have been at some previous shows; but in point of quality, the show was probably quite up to the average. Indeed, this last remark need hardly be made, bearing in mind that some of the crack prize-takers of this year were at Boston. In Class I., for bulls of three years and upward, Mr. Atkinson's Sergeant Irwin, which was third at Liverpool, was placed first; Mr. Moss's General Wharfedale, second; and the Marquis of Exeter's Telemachus 11th, third. As the first and third of these were noticed recently in our report of the Liverpool Show, we

need not criticise them in detail, and this remark applies, more or less, to the other classes. In the two-year-olds another Liverpool third-prize animal, Mr. Foljambe's Lavangro, took first honours, winning the £20 prize, as the best in his class, and the Challenge Cup, as the best bull in the yard. General Fusce was one notch below him, as at the Royal, only being second instead of fourth. Mr. Rowley's Count Towneley, which was commended at Liverpool, took the third prize. Two white beauties were first and second in the yearling bull class—namely, Mr. Torr's Fitzwilliam, and Mr. Foljambe's Flag of France. These were respectively first and third at Liverpool. The second prize Liverpool animal was not present. General Flirt, commended at the Royal, was third. Of the "babies," Messrs. Hutton, Bland, and Pears showed the winners in the order in which their names are placed. We do not think the first is the best in point of symmetry, though he is in that of quality. Still it is possible he may grow into a good one. In the competition for "consolation" prizes, given to members of the Society, for animals which had not obtained prizes in the open classes we did not feel much interest. There was a small but good lot of milk cows over four years of age. Mr. Atkins's Moonshine was first; Mr. Hutton's Economy 3rd, second; and the Stand Company's Blooming Bride, third. In the three-year-old heifers, which have produced a calf at the natural time, Lady Pigot's unpronounceable and ungainly Zvada was put first; Mr. Hutton's Melpomene 3rd, second; and the Marquis of Exeter's Queen of Ithaca, third. Lady Pigot had nothing to stand against her in the two-year-olds, and took first and second honours with her two beauties, Imperious Queen and Rosalba, the Stand Company being third, with Lady Beautiful. There was a good show of one-year-old heifers, and the first and second Liverpool animals not being at Boston, the heifers which were respectively third, fourth, and reserved at the Royal, were first, second, and third at the Lincolnshire Show. In the class for heifer calves Mr. St. John Ackers was first with his Royal third prize calf Third Lady Carew, Mr. Garfit second, with Asphodel, and Mr. Ashby third, with Dorothy. There were only three entries to compete for two prizes for pairs of bullocks, but they were three good ones. Two very useful prizes were given by the Corporation of Boston for the ox or heifer which, from early maturity, quality, and fitness for the butcher, appeared to have brought the greatest profit to the exhibition. Mr. Thos. Bond was first with a remarkably well-bred and grazed roan, and Mr. Rowland second with another good one, also a roan. Indeed, it is remarkable that all but two of the animals competing in this class were roans.

THE SHEEP.

The show of sheep was not so large as at some previous meetings, the entries being only 90, against 123 at Lincoln last year. There was, however, a capital lot of Lincolns, and a fair show of Leicesters, crossbreds being barely represented. In the Leicesters Mr. Turner, of Thorpe-lands, Northampton, was the most successful exhibitor, and Mr. Marris, of Croxton, Ulceby, being the only other exhibitor in these classes, the two gentlemen divided the prizes between them. There was a great muster of Lincoln shearing rams. Mr. Garfit won the first and fourth, and Mr. Wright the second and third prizes. For the other classes we must refer our readers to the prize list. A most extraordinary exhibit appeared as the only representative of the extra stock, and it was so undeniably "extra," having one leg and two feet more than ordinary sheep, that it is not surprising it had no competitors. If it had been in a penny show outside it might have brought something to its owner; but the judges were not impressed with its merit.

THE PIGS.

There was a small show of swine in the large breed classes. Mr. Duckering had only one competitor, and in the small breed classes he also carried off nearly all the prizes, Mr. Arthur Garfit being his only successful competitor, and that only in one class. In the Berkshires, again, there was hardly any competition, and Mr. Duckering took three prizes out of five, one being in a class with a single entry.

THE IMPLEMENTS, &c.

We do not notice implements in detail at county shows, and having only last week given a long report of those shown at Liverpool, it would be absurd to repeat a part of it on the present occasion. Lincolnshire, is, however, the home of many large manufacturers of agricultural implements, and there was consequently quite a large show. There was also an exhibition of poultry and—labourers!

Bull, three years old or upwards.—First prize, £25, T. Atkinson (Sergeant Irwin); second, £7, R. Moss (General Wharfedale); third, £3, Marquis of Exeter (Telemachus 9th).

Bull, two years old.—First prize, £20, F. J. S. Foljambe (Lavagro); second, £7, T. H. Bland (General Fusée); third, £3, J. Rowley (Count Towneley).

Yearling bull.—First prize, £20, J. Torr (Witz-William); second, £7, F. J. S. Foljambe (Flag of France); third, £3, T. H. Bland (General Firt).

Bull calf under a year old.—First prize, £15, W. Hutton (Garriek); second, £7, T. H. Bland (General Favourite); third, £3, T. Pears (Arius).

Bull, two years old or upwards, bred by or the property of a member of the Society residing or farming in the county of Lincoln, and for which first or second prize shall not have been awarded in any other class.—First prize, £10, F. Cartois (Telemachus 7th); second, £5, J. M. Frudd (Prince Charlie).

Bull, under two years old, as above.—First prize, £7, T. Pears (Arius); second, £3, T. Trotter (Waterloo Bean).

Bull, of any age, exhibited at the Society's show, to be held by the winner until the next ensuing annual show.—Prize, challenge cup, value twenty guineas, F. J. S. Foljambe (Lavagro).

Cow, more than four years old, in milk or in calf.—First prize, £25, T. Atkinson (Moonshine); second, £7, W. Hutton (Economy); third, £3, Stand Stud Company (Bloomington Bride).

Heifer, three years old, having produced a calf at its natural time.—First prize, £15, Lady Pigot (Zvezda); second, £7, W. Hutton (Melpomene 3rd); third, £3, Marquis of Exeter (Queen of Ithaca).

Two years old heifer in milk or in calf.—First prize, £15, Lady Pigot (Imperious Queen); second, £7, Lady Pigot (Rosalba); third, £3, Stand Stud Company (Lady Beautiful).

One year old heifer.—First prize, £15, T. H. Bland (Brazilian Bride); second, £7, B. Ackers (2nd Lady Carew); third, £3, Lady Pigot (Victoria Lucida).

She-calf, under one year old.—First prize, £10, B. Ackers (3rd Lady Carew); second, £5, A. Garfit (Asphodel); third, £3, G. A. Ashby (Dorothy).

Cow or heifer, in milk or in calf, bred by or the property of a member of the Society residing at or farming in the county of Lincoln, and for which a first or second prize shall not have been awarded in any other class.—First prize, £10, A. Blanchard (Strawberry); second, £5, J. Oldham.

Heifer, under two years old as above.—First prize, £7, and second, £3, W. Hutton (Strawberry and Golden Drop).

Pair of bullocks, provided there are not less than three entries.—First prize, a piece of plate value £10, or the sum of £10, T. Bond, North Thorsby, Louth; second, £5, W. Chatterton, Hallington, Louth.

Or or heifer which, from early maturity, quality, and fitness for the butcher, appears to have brought the greatest profit to the exhibitor.

COTTAGERS' PRIZES.

Milch cow or heifer, in milk or in calf at the time of showing, the property of a cottager, the tenant occupier of not more than 10 acres, who is getting his living principally as a day labourer or as a working mechanic.

SHEEP.

LEICESTERS.

Shearling ram.—First prize, £15, and second, £5, G. Turner, jun., Thorpelands, Northampton.

Two-shear or older ram.—First prize, £10, T. Marris, Croxton, Ulceby; second, £5, G. Tanaer.

Pen of five ewes, having suckled lambs up to the 10th July, 1877.—Prize, £8, T. Marris.

Pen of five shearling gimmers.—First prize, £8, G. Turner; second, £4, T. Marris.

LINCOLNSHIRE LONGWOOLS.

(Not being Leicesters.)

Two-shear ram.—First prize, £10, E. J. Howard, Nocton Rise, Lincoln; second, £5, C. Sell, Bassingbourne, Royaton; third, £3, J. Pears, Mere, Lincoln.

Three-shear or older ram.—First prize, £10, R. Wright, Lincoln; second, £5, H. Smith, Bingham.

Pen of five ewes, having suckled lambs up to the 10th July.—First prize, £10, W. Roe, North Scarle Field, Newark; second, £5, J. Byron, Sleaford.

Pen of five shearling gimmers.—First prize, £10, W. Hessel-tine, Barton-on-Humber; second, £3, J. Pears; third, £2, R. Wright.

Pen of ten she lambs.—Prize, £5, G. Saul, Boston.

Pen of five shearling wethers.—First prize, £10, C. Sell; second, £5, J. Byron, Kirkby Green.

CROSS-BREDS.

Pen of five cross-bred wethers.—First prize, £7, W. Bett, Fosdyke; second, £3, J. M. Frudd, Bloxholm.

Longwool ram (not being a Leicester) exhibited at the Society's show, to be held by the winner until the next ensuing show.

HORSES.

FOR BREEDING.

ADDITIONAL PRIZES.

To every stallion exhibited in Class 29 passed by the Society's veterinary inspector as free from hereditary lameness or disease, and pronounced by the judges of sufficient merit, a certificate of merit. Such certificate entitles the owner to a premium of £10 on production by him of proof that the horse has served not less than 30 mares in Lincolnshire, at not more than £5 5s. each mare, during the season of 1878.

Stallion for roadsters.—First prize, £10, E. B. Bettinson (A 1); second, £5, R. Wales (Fireaway).

Stallion for draught horses, that shall serve not less than 50 mares in Lincolnshire during the season of 1878, at a price not exceeding £2 2s. each mare.—First prize, £100, J. Nix (Lord of the Manor); second, £10, C. Brooks (Honest Tom the 2nd); third, — J. Byron (The Banker).

Stallion for draught horses, two years old.—First prize, £15, J. Waltham, Winbeach; second, £7, Wm. Burgess (Matchless).

Entire cart colt, one year.—First prize, £10, C. Beart (Wonder); second, £4, J. Cooke, Crowland.

Mare for breeding hunters with a foal at her heels, or having had a living foal in the season of 1878.—First prize, £15, H. Watson (Lady Decanter); second, £7, G. F. Statter (Lady Lynn); third, £3, G. S. Smith.

Hunting foal, the pedigree (if any) to be taken into consideration.—First prize, £10, B. Upton; second, £7, H. Watson; third, £4, G. S. Smith; fourth, £3, J. Martin.

Mare for breeding roadsters, with a foal at her heels, or having had a living foal in the season of 1877.—First prize, £10, Stand Stud Company (Miss Polly); second, £5, T. H. Miller (Mabel Grey).

Mare for breeding draught horses, with a foal at her heels, or having had a living foal in the season of 1877.—First prize, £15, Stand Stud Company (Royal Duchess); second, £7, T. H. Miller (Princess of Wales); third, £3, T. Mayfield.

Cart foal.—First prize, £10, T. H. Miller (Princess Olga); second, £7, T. Harris, Great Hale; third, £4, T. Horry Boston West; fourth, £3, H. Baumber, Boston.

HUNTERS.

Gelding or mare of five or six years old.—First prize, £30, J. B. Booth (Balderby); second, £15, W. Whitehead (Chief Baron); third, £5, A. J. Brown (The Sheriff).

Gelding or mare, four years old, calculated to make a

hunter, substance and breeding to be taken into consideration.—First prize, £50, E. Paddison (Snowstorm); second, £15, W. Whitehead (Sportman); third, £5, A. J. Brown (The Lamb).

Hunter, four years old or upwards, up to carrying not less than 13 stone bred in Lincolnshire.—First prize, £15, J. Hornsby (Jericho); second, £5, C. Lacy (Othello).

Gelding or filly, three years old, breeding to be taken into consideration.—First prize, a whip, value £5, and a sum of £20, J. Davey (Mid Lincoln); second, £10, R. G. F. Howard (Snowdrop).

Colt, two years old, the pedigree (if any) to be taken into consideration.—First prize, £5, and additional prize for same colt, £5, W. Young (Rustic); second, £5, S. S. Mossop (Aphelatan).

Colt, one-year-old, the pedigree (if any) to be taken into consideration.—First prize, £10, B. G. Upton, Raithby; second, £5, W. Young (Rural).

Filly, two years old, the pedigree (if any) to be taken into consideration.—First prize, £10, F. C. Marshall (Snowdrop); second, £5, J. Glover, Boston.

Filly, one year old, the pedigree (if any) to be taken into consideration.—First prize, £7, J. Martin, Wainfleet; second, £3, C. Clarke, Ashby-de-la-Launde.

Gelding or mare which, on being ridden and tried upon the show ground, on the 26th of July, shall be adjudged to be the cleverest jumper.—First prize, £10; second, £5.

Horse in harness, with the best park action (consideration given to pace).—First prize, £10; second, £5.

Horses in harness with best park action.—First prize, £10, second, £5.

Weight-carrying cob, mare or gelding, not exceeding eight years old, and not being under 14 hands, nor above 15 hands, quality and action to be specially considered.—First prize, £10, J. Green, Blankney; second, £5, J. Oldham, Frithville.

Hack, mare or gelding, exceeding 14 hands, and not exceeding 15 hands 2 inches.—First prize, £10, second, £5.

Pony, mare or gelding, not exceeding 14 hands.—First prize, £10; second, £5; third, £3.

AGRICULTURAL HORSES.

Cart gelding, two years old.—First prize, £10, Mr. Smith; second, £4, W. H. Holdsworth.

Cart filly, two years old.—First prize, £10, C. F. Paddison, Newark; second, £4, T. H. Miller (Fatima).

Cart filly, one-year-old.—First prize, £7, R. Hopper, Whittlesey; second, £3, W. F. Robinson (Ginger Brandy).

Pair of draught horses, geldings, or mares, under eight years old.—First prize, £10; second, £5.

Extra Stock Agricultural Horses.—Prize, £2, C. F. Swain, Leverton, Boston.

PIGS.

Boar, large breed, not less than twelve months old.—First prize, £10, R. E. Duckering, Northorpe; second, £5, R. E. Duckering.

Boar, large breed, not exceeding twelve months old.—First prize, £5, R. E. Duckering; second, £3, R. E. Duckering.

Boar, small breed, not less than twelve months old.—First prize, £10, R. E. Duckering; second, £5, R. E. Duckering; G. P. Watson, Londonthorpe, reserved.

Boar, small breed, not exceeding twelve months old.—First prize, £5; second, £3. Withheld.

Berkshire boar.—First prize, £5, A. Garfit, Scothern; second, £3, C. E. Duckering, Whitehoe.

Sow, large breed, having had a litter since 1st March, 1877, or in pig at the time of showing.—First prize, £5, R. E. Duckering; second, £3, R. E. Duckering.

Sow, small breed, having had a litter since 1st March, 1877, or in pig at the time of showing.—First prize, £5, C. E. Duckering; second, £3, R. E. Duckering.

Berkshire sow, having had a litter since 1st March, 1877, or in pig at the time of showing.—First prize, £5, C. E. Duckering; second, £3, B. S. J. Ackers, Painswick, Gloucestershire.

Three breeding pigs of the same litter, not exceeding six months old, large breed.—Prize, £5, R. E. Duckering.

Three breeding pigs of the same litter, not exceeding six months old, small breed.—Prize, £5, R. E. Duckering.

Three breeding pigs of the same litter, not exceeding six months old, Berkshire breed.—Prize, £5, A. Garfit.

WOOL.

For the best five fleeces of hogg wool.—First prize, 40s., G. Saul, Sibsey, Boston; second, 12s. 6d., J. Martin, Wainfleet, Boston.

For the best five fleeces of ewe or wether wool.—First prize, 40s., J. E. Robinson, Tittom Hall, Boston (wether wool); second, 12s. 6d., J. Martin.

HORSE SHOEING.

To the smith exhibiting the greatest skill in shoeing a hunter.—First prize, £5; second, £3; third, £2; fourth, £1.

To the smith exhibiting the greatest skill in shoeing a draught horse used for agricultural purposes.—First prize, £5; second, £3; third, £2; fourth, £1.

SHROPSHIRE AND WEST MIDLAND.

So soon after Liverpool, and so near to the district, we were anxious to see how the wave had carried on, for there is a change in the destinies of local agricultural shows. At one time, and a deal of good it did, they began popping up their little heads in every part of the kingdom. This excited in the small farmer's mind a feverishness which led him gradually to the larger displays when common sense showed him he had so much to learn and utilize. Now that he has begun to travel, and moreover likes a foal from a famous horse, and pigs with a less inquiring snout, in the natural course of things these tiny exhibitions have had an inclination to run together. Of this kind is the Shropshire and West Midland Society's Show, or rather will be in time especially so. It is well supported by a healthy neighbourhood, and has this year for its President a gentleman bearing the suggestive title of Harlech, some thirty years since so famous for its Galloway and pony races, where sires of the sort lived whose blood and character you can trace over to-day in choice specimens all over the kingdom, showing what solid good they do for their country who cultivate or introduce superior breeds. The great merit of those glorious ponies, tiny specimens of which made fifty guineas the pair at a time when the ordinary sort were sold for as many shillings, was due to that popular and hospitable sportsman, Colonel Vaughan, of Rûg. The Vice-President we remember so well in Oxford on the river, and in this "grind" also thirty years since; and the pluck which distinguished that college crew and those daring horsemen, we rejoice to find, yet lives to inspire a patriotic movement in the cause of agriculture. This Society has been only established three years, but the arrangements are good, and the accommodation ample. Unfortunately this year it clashes with the Worcestershire Show. Some of the classes are consequently thinly filled by comparison with last year. There was also another meeting at Wynstay, which kept many visitors away. The exhibition is, however, open for three days. There are three judging rings, in which, respectively as we enter, the thoroughbred horses, the cart horses, and the Shorthorn bulls are being pronounced upon. Shropshire has always had a name for good hunting cattle. The sires we see all fill the eye respectably. There are also famous strains represented, Maryas, Irish Birdcatcher, Fagh-a-ballagh, Teddington, Beadsman, Stockwell, Kettledrum, Voltigeur, West Australian, Trumpeter, Caractacus all being named in our catalogue as sires on the one side or the other. The judges are not long, however, in sorting out two damson browns for first and second prizes, the one Happy Land by Kettledrum, the other Polarine by Beadsman, dam by Stockwell, the property of the Master of the Shrewsbury Hunt. Between the two an excellent steed might have been produced. Happy Land, the winner of first honours, has a good back and limbs, but has not the fire and blood-like appearance of the second prize

horse. They are, however, both a credit to the district, but for choice we should take the second to breed by. They are both neat and hunter-like, so far as thorough-breds look hunter-like. Happy Land had best front action, but did not go so well behind as his rival. In performance on the turf they were both surpassed by Lambash by Marssas, who showed his game nature in his irritation at being reined up behind his more successful adversaries in the ring. The hunting mare class included a medley. Mr. John Hill's Fanny, aged 15, the winner of the prize in this class last year, failed to satisfy the judges to-day. Her front legs are gone, and she is quite cramped from early work, having in her day been a famous performer. The prize went to Nelly B'y, a mealy chestnut, which could move better, but did not look so business-like for the cover side; a bay Cleveland-like mare of Mr. Earl's taking second honours. Amongst the hunters foaled in 1873 Mr. Humphries' white-legged chestnut had an easy win. He was full at once of power and quality, looked delightful to ride, and difficult to pass in the field. Mr. Maddocks was first amongst the two-year-olds with a brown gelding, and Mr. Clay amongst the yearlings with a powerful and blood-like chestnut. For the best hack, the property of a tenant-farmer, only one candidate appeared, Mr. Harrison's grey, an animal, however, that obtained considerable admiration. The weight-carrying cobs, between 14 and 15 hands, included some very good samples. The best mover in every pace but the gallop, when, as is the case with high-actioned horses, she went round, and a very neat one to boot, was Mr. Nelson's Madge. She was, in the end, for some reason, put altogether aside, and the prize given to a black gelding, whose paces were his best point. Rev. J. Hill was second, with a dapple-grey stout cob of taking appearance, and the best gallopper by far of the lot. In the trot he has not the same amount of high-knee action as his rival. Above 14 and under 15 hands, Mr. Hogg's brown horse won first place—a fairly-turned animal—Mr. Darby being second with a very corky and excitable bay, who was placed first at the Royal last year. He is a fine mover, but wants better putting together above. The ponies included a rare-actioned grey in the winner, (Mr. Woodbourne's Daisy, Mr. Jones's black Jack going strong and stoutly for second place. Amongst the best hunters to carry not less than 13 stone Mr. Hill's Glue Pot, the winner last year, a very fast and stout animal, had, after much consideration, to give way to Mr. Darby's black, a neat performer over the hurdles, but not having the pace of his rival. His build is, however, much more powerful, and the decision pleased everyone. The prize for the best agricultural stallion was won by the well-known chestnut Clydesdale, Topsman, whose trotting is a marvel, second honours going to a very stout and good mover, the Stand Stud Company's Young Champion, also well known in the prize ring. There were some other very good local stallions shown had these famous itinerant champions been only away. As a two-year-old Mr. Crowther's bay, a colt of great promise, wins, the second belonging to the Stand Stud Company, and a very neat if less powerful horse than his rival. They have both pleasant heads, but especially the last, who is just the horse for farm work, the other looking more fitted for the dray. The cart mares were inferior to the stallions. Mr. Jackson's black Flower, amongst the two-year-olds, showed power and activity, and is good-looking to boot. Mr. Moore's yearling, Darby, is neat and strong, and has the cleanest of legs. But the sight of the Show was Mr. Meadows's pair of waggon horses, a brown and bay, such immense animals, short-legged, and active as ponies. The second prize pair was also admirable, and Mr. Nicolson's roans were well matched. The Shorthorns were nothing

particular, the prize cow simply being neat. The bulls showed a good deal of fine quality, but were apparently fresh off dairy farms, and so did not exhibit to the advantage they might have done had they been only stail-fed for competition. The Herefords were also under the mark, the concurrent Worcester Show being credited with their presence. The pigs were mainly white, some large, some small, and there were a few very ordinary Berkshires in the pens, the odour from which was detestable. There ought always to be a layer of burnt clay or ashes under the straw in the pig pens to absorb moisture and smell—it were so easily done. The Shropshire sheep were a good exhibition, Mr. Mansell's first-prize shearling, who was also adjudged the extra special prize, being particularly good, of fine even character, very long, and low on leg, his fleece filling the hand with that respondent elasticity the connoisseur requires. The whole number shown were more of a sort than we saw last year, the variety of under-material which had been experimented upon not being so apparent. The shorn fleeces on a shelf looked clear of dark stain, but we were glad to adjourn to the adjoining shed, where there was a pervading scent of freshness in butter and cheese. The samples looked delicious amidst nettle leaves, and the farmers' wives and daughters who gathered to criticise were blooming as the blush rose, and fragrant as whey. We could not at first understand why the scientific, as they followed in the rank along, kept gently pressing their thumbs upon the surface of the cheeses, but we found on inquiry that it was for the same reason for which young gentlemen are said to press their partner's hand in the dance—that is, to ascertain if there be a possible weak spot in the heart.

PRIZE LIST.

HORSES.

Cart stallion, of any age, for agricultural purposes.—First prize, J. F. Crowther, Mirfield; second, Stand Stud Company.

Cart stallion, not exceeding three years old on January 1st, 1877.—First prize, J. F. Crowther; second, Stand Stud Company.

Cart mare and foal.—First prize, A. Darby, Shrewsbury (Gipsy); second, G. Bowen, Salop.

Cart mare and foal, the property of a tenant farmer.—First prize, J. Griffiths, Whitechurch (Smiler); second, J. Platt, Malpas.

Cart mare or gelding, foaled in 1874.—First prize, T. F. Jackson, Chester (Flower); second, T. Green, Salop.

Cart mare or gelding, foaled in 1875.—First prize, L. L. Moore, Glanmehely (Darby); second, C. W. Brierly, Prestwich (Mischiefs).

Cart mare or gelding, of any age, the property of a tenant farmer.—Prize, W. Brown, Chester.

Pair of waggon horses, the property of a tenant farmer.—First prize, W. A. Meadows, Rainhill; second, C. W. Brierly, Prestwich.

Pair of waggon horses, the property of a tenant farmer.—Prize, T. Lowe, Chester.

Thorough-bred stallion, suitable for getting weight-carrying hunters.—First prize, J. Poinons, Tarporley (Happy Land); second, M. Hulton-Harrop, Shrewsbury (Polarine).

Brood mare and foal, for hunting purposes.—First prize, J. Gouldbourn, jun., Salop (Nelly Bly); second, F. Earl, Shifnal.

Mare or gelding, for hunting purposes, foaled in 1873.—First prize, J. Humphreys, Salop (Brilliant); second, A. Price, Salop (Polly).

Mare or gelding, for hunting purposes.—First prize, S. Maddocks, Whitechurch; second, R. Nicholson, jun., Chester (Rufus).

Mare or gelding, for hunting purposes, foaled in 1873 or 1874.—Prize, S. Maddocks, Hadley.

Mare or gelding, for hunting purposes.—First prize, C. Clay, Whitechurch; second, L. L. Moore, Glanmehely, Kerry.

Hack or harness mare or gelding, of any age, not under 15 hands, the property of a tenant farmer or tradesman.—Prize, J. G. Harrison, jun., Whitechurch.

Weight-carrying cob, a roadster, not exceeding 15 hands,

and not under 14 hands.—First prize, T. M. L. Vernon, Tushingham; second, Rev. J. Hill, Shrewsbury (Punch).

Cob, hack, or roadster, not exceeding 15 hands.—First prize, C. W. Hoger, Congleton (Rob Roy); second, A. Darby, Shrewsbury (Prince).

Pony, not exceeding thirteen hands.—First prize, M. Woodburne, Salop (Daisy); second, J. Jones, Shrewsbury (Black Jack).

Hunter, of any age, mare or gelding, qualified to carry not less than thirteen stone.—First prize, A. Darby, Shrewsbury (Black Jack); second, J. Hill, Salop (Blue Pot).

CATTLE.

SHORTHORNS.

Bull, not under two years old on January 1st, 1877.—First prize, T. Hiles, Shrewsbury (Marquis of Shrewsbury); second, R. Eardley, Salop (Major Buckstone).

Bull not exceeding three years old on January 1st, 1877, the property of a tenant farmer.—First prize, R. Eardley, Audem; second, Ed. Richardson, Taporley (Bonfire).

Bull, above one year and not exceeding two years old on January 1st, 1877.—First prize, T. Coomer, Nantwich (Eighth Duke of Keele); second, G. G. Blantern, Salop (Collingwood).

Bull, not exceeding twelve months old on January 1st, 1877.—First prize, G. Houlding, Salop; second, T. Burgess, Whitechurch (Ironmaster).

Cow in milk or in calf, having produced a calf within twelve months.—First prize, P. H. Chesters, Nantwich (Princess Victoria); second, W. Brierley, Prestwich (Ross).

Pair of heifers, in milk or in calf, not exceeding three years old on January 1st, 1877.—First prize G. T. Phillips, Newport; second, W. Nevett, Shrewsbury.

Pair of heifers, not exceeding two years old on January 1st, 1877.—First prize, S. Dickin, Shrewsbury; second, T. Atkinson, Manchester.

Pair of heifers, not exceeding twelve months old on January 1st, 1877.—First prize, G. T. Phillips, Newport; second, C. W. Brierley, Prestwich.

HEREFORDS.

Bull, not under two years old on January 1st, 1877.—First and extra special prize, A. Rogers, Kingston (Grateful); second, Sarah Edwards, Leominster (Sir Edward).

Bull, not exceeding two years old on January 1st, 1877.—First prize, G. Robinson, Salop (Marquis 2nd); second, Mrs. Asterley, Oswestry, (Dauphin 8th).

Bull, not exceeding twelve months old on the 1st of January, 1877.—First prize, T. J. Carwardine, Leominster (The Sultan); second, T. J. Carwardine (The Czar).

Cow in milk or in calf, having produced a calf within twelve months.—First prize, T. Myddleton, (Nina); second, T. Nott, Bampton Brian (Melody 4th).

Pair of heifers, in milk or in calf, not exceeding three years old on January 1st, 1877.—First prize, T. Myddleton.

Pair of heifers, not exceeding two years old on January 1st, 1877.—First prize, A. Rogers, Kingston.

Pair of heifers, not exceeding twelve months old on January 1st, 1877.—First prize, Sarah Edwards, Leominster; second, T. Nott.

Pair of dairy cows, in milk, of any breed.—First prize, T. Burgess, Whitechurch; second, W. Nevett, Shrewsbury; third, W. Nevett.

Pair of dairy cows, of any breed, in milk or in calf, having produced a calf within eight months, the property of a tenant farmer.—Prize, T. Burgess, Whitechurch.

Dairy cow, of any breed, in milk or in calf, having produced a calf within eight months.—Prize, W. Brown, Handley.

Pair of heifers, of any breed, in milk, best adapted for dairying purposes, not exceeding three years old on January 1st, 1877, the property of a tenant farmer.—First prize, T. Burgess, Whitechurch; second, W. Nunnerley, Whitechurch.

Pair of heifers of any breed, best adapted for dairying purposes, not exceeding two years old on January 1st, 1877, the property of a tenant farmer.—Prize, P. H. Chesters, Nantwich.

Pair of heifers of any breed, best adapted for dairying purposes, not exceeding one year old on January 1st, 1877, the property of a tenant farmer.—Prize, J. Cooke, Malpas.

Fat beast (presented by the butchers of Whitechurch and neighbourhood).—First prize, T. Nunnerley, Whitechurch second, W. Brown, Handley.

SHEEP.

SHROPSHIRE.

Shearling ram.—First prize, T. Mansell, Salop; second, T. Penn, Ludlow.

Ram, of any other age.—First prize, T. Mansell; second, T. J. Mansell, Bridgnorth.

Pen of ten breeding ewes, having reared lambs this season.—First prize, F. Bach, Salop; second, R. Thomas, Salop.

Pen of ten shearling ewes.—First prize, R. Thomas, Baschurch; second, W. Holder, Shrewsbury.

Pen of five shearling ewes.—First prize, Mrs. H. Smith, Shifnal; second, R. Edwards, Shrewsbury.

LAMBS.

Pen of ten ewe lambs, in the Shropshire class. A silver cup.—First prize, R. Thomas, Salop; second, J. E. Farmer, Ludlow.

Pen of ten ewe lambs, in the Shropshire class, the property of a tenant farmer.—Prize, T. Topham, Whitechurch.

PIGS.

LARGE BREED, EXCLUDING BERKSHIRES.

Boar.—First prize, W. Brown, Handley; second, G. F. Jackson, Chester.

Sow, in pig or with pigs.—First prize, J. H. Kemp, Market Drayton; second, W. O. Foster, Shifnal.

SMALL BREEDS, EXCLUDING BERKSHIRES.

Boar.—First and second prize, B. G. D. Cooke, Mold Flintshire.

Sow, in pig, or with pigs.—First prize, B. G. D. Cooke, Mold; second, R. K. Mainwaring, Market Drayton.

BERKSHIRES.

Boar.—First prize, M. Woodburne, Ellesmere; second, A. B. Foster, Tamworth.

Sow, in pig or with pigs.—First and second prize, A. B. Foster, Tamworth.

Boar, of any age or breed.—Prize, M. Woodburne, Ellesmere.

Sow, of any age or breed, in pig or with pigs.—Prize, J. H. Kemp, Market Drayton.

EXTRA SPECIAL LIVE STOCK.

The sum of £25 (added to the Society's first prize) for the best cart stallion, any age, to travel or stand in the year 1873 through or in the town of Whitechurch (open).—Prize, J. F. Crowther (Lonest Tom).

Silver cup or piece of plate, value £10 10s., for the best thorough-bred stallion, having served with the county during the season of 1877, and being the property of a member of the Society.—Prize, Mr. Hulton-Harrop (Polardine).

Silver cup or piece of plate, value £5 5s., for the best Shorthorn bull exhibited in the above classes, and being the property of a member of the Society.—Prize, T. Hiles, Shrewsbury.

A silver cup of the value of £5 5s., for the best ram in the Shropshire classes, the owner being a member of the Society.—Prize, T. Mansell, Ercall Park.

Silver cup or piece of plate, value £5, for the best mare or gelding for hunting, foaled in 1874, the property of a member.—Prize Mr. Maddock, Hadley.

Extra special prize of £5 5s., for the best Hereford bull exhibited in Class 29 or 30, being the property of a member of the Society.—Prize, Mr. Aaron Rogers, Kingston.

CHEESE.

Samples of four cheese, exceeding 50lbs. each.—First prize, H. Willis, Tarporley; second, J. Ravenshaw, Salop; third, J. Brereton, Chester.

Samples of four cheese, not less than 20lbs., not exceeding 50lbs. each.—First T. Williams, Whitechurch; second, C. Mort, Shrewsbury; third, Fern Hill Milk and Cheese Factory Company.

CHEESE—OTHER THAN CHEDDAR.

Sample of four cheese exceeding 50lbs. each.—First, H. Willis, Tarporley; second, J. Ravenshaw, Preston, Brockhurst.

Sample of four cheese not exceeding 50lbs. each.—First, T. Williams, Whitechurch; second, W. Mort, Salop.

CHEDDAR CHEESE.

Samples of four Cheddar cheese not less than 20lbs. each.—First, J. Ravenshaw, Preston, Brockhurst; second, J. Goulburne, jun., Whitechurch.

BUTTER.

Tub of butter, not less than 60lbs.—First, J. Jacks, Ellesmere; second, R. T. Morris, Ellesmere.

6lbs. of fresh butter, in single lbs.—First prize, W. Heath, Silop; second, Mr. Morgan.

6lb. of fresh butter, in single lbs.—First prize, T. Burgess, Whitchurch; second, W. Sheraton, Ellesmere.

WOOL.

Five fleeces of Shropshire wool.—First prize, S. Amies, Craven Arms; second, W. Fowler, Shrewsbury.

WORCESTERSHIRE.

The annual exhibition of this Society was opened on July 21, at Kidderminster, in a spacious meadow, at "The Elms," which has been kindly lent for the occasion by Mr. W. P. Goodwin; and, although not so extensive as some of its predecessors, is nevertheless of a very satisfactory description. There is a falling-off in the entries of cattle, which number only fifty-one, as compared with sixty-five at Dudley in 1875—no Show being held last year, in consequence of the visit of the Royal Society to this town—but in the aggregate they are of fully average merit. This will be apparent from the fact that among the Shorthorn bulls are to be found such an animal as the Marquis of Exeter's grand roan Telemachus 6th, which was first in his class at the Birmingham Royal, and likewise took honours at Liverpool; and among the females his lordship's beautiful cow Telemacina. The Herefords are well represented, foremost among the bulls being Mr. Taylor's Tredegar and Thoughtful, well known as prize-winners in the Royal and local competitions; while the cow and heifer classes include some first-rate specimens of the breed. The sheep muster in about the same numerical strength as in 1875, the Shropshires, as usual, taking the lead. The Cotswolds, however, the only long-woolled varieties upon the ground, are very good. The pigs are a very praiseworthy collection, Mr. R. Tommas, of Winson Green, near Birmingham, winning not only a majority of the prizes for the white varieties, but one of those for Berkshire sows. Of horses the entries present an aggregate of 105, against 135 at Dudley; and they form a noteworthy feature.

The following are among the prizes awarded:—

CATTLE.

SHORTHORNS.

Bull, above two years old.—First prize, £10, the Toddington challenge cup, and Earl Beauchamp's prize for the best bull in the Shorthorn classes, the Marquis of Exeter; second, £5, W. C. T. Mynors.

Bull, above two years old, the property of a tenant farmer resident in Worcestershire.—First prize, £8, T. Harris; second, £4, T. M. Hopkins.

Bull, above one and under two years old.—First prize, £10, J. Kewell; second, £5, J. Briscoe.

Short-horn bull, under two years old, the property of a tenant farmer resident in Worcestershire.—First prize, £8, J. Briscoe; second, £4, T. M. Hopkins.

Cow, in milk or in calf.—First prize, £8, the Marquis of Exeter; second, £4, W. G. Garne.

Cow, in milk or in calf, the property of a tenant farmer in Worcestershire.—First prize, £6, and the prize of £10, for the best beast bred and exhibited by a Worcestershire tenant farmer, T. Harris; second, £4, J. Woodward.

Yearling heifer.—First prize, £6, and second, £4, W. G. Garne; third, £3, T. Harris.

HEREFORDS.

Bull above two years old.—First and the President's prize of £30 for the best animal in the Hereford classes, W. Taylor; second, £5, W. Taylor.

Bull above one year and under two years old.—First prize, £10, S. Edwards; second, £5, J. T. Carwardine; third, £3, F. Platt.

Cow in milk or in calf.—First prize, £8, and prize of £10 for the best cow or heifer in the cattle classes, W. Tudge; second, £4, J. T. Carwardine.

Two-year-old heifer in milk or in calf.—Prize, £8, W. Tudge.

Yearling heifer.—First prize, £6, and second £4, S. Edwards.

Pair of dairy cows in milk, any breed.—First prize, £8, and second, £4, the Earl of Beauchamp.

HORSES.

Stallion cart horse for agricultural purposes.—First prize, Mr. Wynn; second, E. Pearse.

Stallion cart horse, in Worcestershire, or within a radius of twenty miles of Kidderminster.—First prize, J. Nott; second, S. Davies.

Stallion cart colt for agricultural purposes, not exceeding three years old.—First prize, W. Coney; second, E. Green.

Dray or cart horse gelding or mare, four years old and upwards.—First prize, W. Wynn; second, E. Pease.

Pair of cart geldings or mares.—Prize, E. Humphries.

Cart gelding or mare, three years old.—First prize, G. Groves; second, J. B. Workman.

Cart gelding or filly, two years old.—First prize, G. Groves; second, J. B. Workman.

Cart or agricultural mare and foal.—First prize, G. Groves; second, J. Giles.

Hunter, above five years old.—First prize, G. Carless; second, C. P. Noel.

Hunter, equal to 12 stone.—First prize, G. Carless; second, G. B. Essex.

Hunter, the property of a tenant farmer or tradesman in Worcestershire or within ten miles of Kidderminster.—First prize, Mr. Carless; second, H. J. Bailey.

Hunter, the property of a tenant farmer resident in Worcestershire, equal to 15 stone weight.—Prize, R. Bagnall.

Hunting mare or gelding under five years old.—First prize, H. J. Bailey; second, W. E. Tharme.

Three-year-old gelding or mare, by a thorough-bred horse.—First prize, C. Beavan; second, T. Cook.

Gelding or filly, two years old.—Prize, H. J. Bailey.

Weight-carrying cob not exceeding 15 hands.—First prize, H. J. Bailey; second, G. Carless.

Hack, not exceeding fifteen hands.—Prize, W. P. Hughes.

Pony under fourteen hands.—First prize, J. Grove; second, J. B. Workman.

Brood mare for producing hunters.—Prize, E. V. Wheeler.

Pair of carriage horses (to be driven on to the ground).—Prize, Rev. G. D. Boyle, Kidderminster.—*Midland Counties Herald*

ROYAL NORTHERN.

The show of this Society, at Aberdeen, on July the 19th, was attended with fair success. The weather was fine in the early part of the day; but rain fell in the evening, which prevented the town's people from attending. The showyard was visited by most of the resident gentry in the county and by a large body of agriculturists. The amount drawn at the gates was £404 14s. 10d., being about £54 less than was drawn at the last show of the Society in 1875. The arrangement of the showyard was excellent, reflecting creditably on the exertion of Mr. Yeats, advocate, the Secretary. As usual, a luncheon took place in the showyard in the afternoon, at which the Earl of Aberdeen presided, and proposed the customary toasts. The entries in the various departments numbered 845, being 33 fewer than at the last show.—*Banffshire Journal*.

MINERAL WATERS.—Where will it end, this importation of mineral waters? Here is my old friend Giesshubler, which we used to think so delicious when mixed with Gumpoldheirchser during the blazing heat of the Vienna Exhibition year, now regularly acclimatised amongst us. The same may be said of Tannus, St. Galmier, and Apollinaris; while Burrows bottles the sparkling Malvern spring. Fleet liquefies his potash, and Schweppe declares that his sale of Brighton and Nassau seltzer is as great as ever. The "effervescence" of which Mrs. Gamp complained seems to be highly popular just now.—*World*.

MR. J. B. LAWES ON AGRICULTURAL CHEMISTRY.

The following lecture by Mr. J. B. Lawes, delivered at Haddington, on April 20th, with the discussion which followed, is given on the "better-late-than-never" principle.

Mr. LAWES began by stating that many years ago a friend of his took up the subject of agricultural chemistry, but after a time abandoned it for some other pursuit, the reason for this change being, to quote his own words, "agricultural chemistry was nothing but ammonia and phosphorus." He was rather afraid that after hearing what he was about to say they would on their return home, if questioned on the subject, give the same answer. Chemistry in its application to agriculture was one of the most modern of sciences, if a subject of which so little was really known had any claim to be called a science. The manuring of land was, however, a very ancient operation, and would be found mentioned in the writings of Greek and Roman authors, but to define what a complex body was—to separate its constituents and define the part played by each in the growth of crops was a thing that owed its introduction to the present century. Artificial manures, so far as they related to the present, had their origin so recently as to come within his own recollection. Before they could thoroughly understand the action of the common manures on the farm, they would require to know something of the substances of which these manures were composed. That there was much yet left to be learnt with regard to the common manures they were well aware, and there was no one more ready to confess his ignorance than the person who now addressed them. He knew that he had before him a body of agriculturists who had earned a high reputation for skill and ability, but he did not despair of being able to add something to the knowledge which they already possessed. He proposed to show the composition of farmyard dung, the constituents by which it fertilised their crops, the lasting properties of the bulky manure, and how it was enriched by purchased food, and the connection between farmyard dung and the artificial compounds. He would refer to experiments which had been carried on for a long time on his own farm at Rothamsted, which had occupied a good deal of his attention, but he knew if his calculations did not appear to be justified by the evidence he would place before them, they would not hesitate to reject them. Let them assume the case of a farm of 400 acres of arable land, with four course rotation. The straw was consumed in the yard—one-fifth by stock and four-fifths as litter. The food and litter of that farm would give 840 tons of dung, or, if they deducted water, 243 tons. How was this quantity made up? Nearly four-fifths of the whole was made up of straw, and this straw must form a large proportion of farmyard dung, when they considered the amount of food consumed by animals and what was required for the processes of respiration. By the table No. 1 on the wall (given below), they would see what was the average composition of the whole of that dung. He left out unimportant substances in the estimates submitted, and had simply given the three substances of most importance—potash, phosphate of lime, and nitrogen. The figures given had not been arrived at by practical analysis, but had been calculated from experiments, and were closely confirmed by several analyses of farmyard dung. Professor Voelcker had told them in what state of combination these substances were, and had shown them to be in great part very insoluble, so that plants could not get hold of them until they went through further changes of soil. Of nitrogen, 14lbs. was about equivalent to 17lbs. of ammonia, and only $\frac{2}{3}$ of that was in the form of salts of ammonia, or the active form of ammonia. They all knew about soluble and insoluble phosphates—he supposed there was hardly a farmer in Scotland but knew as much about these as he did himself. But what of soluble and insoluble nitrogen, which was a much more costly thing? The gentlemen who closely analysed

chemical substances, telling them all about them with as accuracy that was astonishing to a scientific man, told them nothing of these. They were content to turn these into ammonia, under the designation "yielding ammonia," leaving them in a happy state of ignorance as to when such changes took place in their soils. Here straw occupied a very large place, and he proceeded to show what straw did for crops. On two pieces of land, half grass and half permanent pasture, they had applied at Rothamsted an equal amount, one receiving 2,000lbs. per acre of cut wheat straw. Several years elapsed before any action was visible, but a combination had at length taken place, and during the last ten years the crop had amounted to 11 cwt. of hay per annum. On a field of permanent barley they found by experiments that not more than 6 quarters per acre could be grown, because if they tried to increase the crop beyond that, it, to use a common phrase, "runs to straw." And to grow 6 quarters of barley they had every year to use a considerable quantity of soluble ammonia. They required to have 50 lbs. of soluble ammonia or some equivalent of nitrate of soda. Of farmyard manure they required 250lbs., because that substance was in an insoluble form. He next referred to a field lately brought into potato cultivation, which had been for twenty years under manure, and the produce of which exceeded that of the unmanured land by 8 cwt. In another field they cut off about an acre and left it in manure. After a lapse of fully twenty-five years the careful observer could still see slight indications of where the previous dung had been. Dung exercised a much greater influence on crops than was generally supposed. It acted first of all by supplying a large amount of matter in an insoluble state, hence its lasting properties were very great. Probably part of the dung applied on the first day of entry on a farm might form part of the crop at the end of a nineteen year's lease. What were the manurial properties of dung? Was it possible that the sole manurial properties of that dark mass of strong-smelling substance they called farmyard manure were due to chemical salts? and was it true that plants preferred their food in that form? He wished them to assent to this if he proved to their satisfaction that the organic matter which constituted so large a proportion of farmyard dung did not act as manure. If the organic matter of crops was derived from the soil, then they must depend on the stores accumulated by previous dunging, and artificial manures would consequently have a much more limited application. The question was undoubtedly one of great importance, as 90 to 95 per cent. of their crops consisted of organic matter. If, however, this matter came from the atmosphere, and not the soil, then the connection between farmyard manure and the other kinds of manures was much closer than was generally admitted. He referred to table No. 1 (annexed), showing that organic matter and water left but a small residue of farmyard manure, and remarked that the question arose when they applied a substance which did not contain organic matter and increased their crop, was that increase made at the expense of organic matter, or was it utterly independent of that? That was a question which could not be answered by one or two experiments. But suppose they were to make an investigation, how would they go about it? Well, as dung contained a great deal of organic matter they might keep an acre always in dung and another acre always in manures which did not contain organic matter. Suppose they did this, how long would it take to decide whether the organic matter did or did not tend to help their crops? Assuming that the crop with chemical salts was always as big or bigger than where these were not employed, some might say five years, and others might give ten years, as the period that would have to elapse. But he dared say the most sceptical of them, if they saw year after year a crop as good whether these were put on or not, would be satisfied that putting on organic matter did not help their crops. The experiments he now referred to extended further back than nineteen years—in one case to nearly double that space of time. He would read an account of what had been done at Rothamsted bearing upon the points referred to. From one acre of land produce had been removed where organic

manure was applied each year in manure and where there was an absence of this, as follows:—

Last year when dung was used.	Produce in 1876, with dung each year.	Produce in 1876, without organic matter in manure.
Wheat... 36 years ago	1 ton 13 cwt.	2 ton 13 cwt.
Barley... 30 years ago	2 ton 13 cwt.	2 ton 7 cwt.
Mangels. 34 years ago	19½ ton 0 cwt.	25 ton 0 cwt.
Pasture.. 22 years ago	2 ton 1 cwt.	3 ton 12 cwt.

In all these cases the evidence would be seen to be exceedingly strong in favour of the view that plants did not take up their organic matter out of the soil at all. Possibly there were quantities of mineral matter that could be taken out of the soil every year, but it was obvious that a very large quantity of matter came from a source not supplied through the soil, and he thought they might safely conclude that the organic matter in dung did not act as a manure at all. What, then, were the functions performed by organic matter? If they referred to their garden soil, they would find it far superior to that of the farm, but then gardens received manure in a way which they as farmers could not apply it, and gardening and farming must be held to be quite distinct. At Rothamsted there was a wheat field which for three years in succession had received 15 tons per acre, yet it could not be compared to his garden soil. With reference to the enrichment of dung by artificial food, they had to look at quality not quantity, bearing in mind the great amount wasted in respiration and the quantity stored up in the animal. Some fifteen years ago he prepared and published a table regarding the manure properties of the different kinds of purchased food and their commercial value, but the table was not much regarded at the time, as indeed had been the case with many things of his. It had, however, received some attention on the passing of the Irish Land Act and the Agricultural Holdings Act, and about a year ago a member of the Royal Agricultural Society of England introduced a proposition that a grant of money should be made in the interests of farmers with a view to conduct experiments for testing the value of the figures he then gave. The matter was ultimately referred to a chemical committee, and farmers, landowners, and scientific men were examined. The result was that they agreed as to the desirability of conducting the proposed experiments, although it was deemed improbable that farmers and others, not accustomed to make investigations of the kind, would not be able to prove whether these figures were correct or not. The Duke of Bedford offered a farm for the purpose of making the investigation, but further examination showed that the field was not suited for the purpose, whereupon the Duke allowed them to select any farm they might choose on his estate. They at length obtained 27 acres which were suited for these experiments. To a depth of about six feet the soil appeared to be nothing but sand. The experiments in progress were first of all the devoting of 16 acres to rotation experiments with the different cattle foods. Manure equivalent to cake and corn had to be supplied in artificial compounds (in conformity with the tables already referred to) as follows:

	1,000 lbs. of cake.	1,000 lbs. of maize or Indian corn.
Bone ash.....	100 lbs.	16 lbs.
Sulphate potash.....	62 "	7 "
Sulphate magnesia.....	65 "	11 "
Nitrate soda.....	361 "	76 "

If there was any truth in chemistry, they ought to arrive at very important results from these experiments; but the results themselves were a question of time. Referring to the action of potash, phosphate of lime, and nitrogen on the soil, he said the two former entered more quickly into combination with the soil, and were taken up by plants with great ease. For the last thirty years he had observed that they had never descended into the subsoil at all—the first nine inches contained them. It was very different, however, with nitrogen, soluble nitrogen, salts of ammonia, or nitric acid, which was its ultimate form. They had no combining power with the soil, and the water from wells and rivers over England and Scotland had always been found to contain more or less of nitric acid. It was not to be wondered at that their loss here should be immense, some of which they might arrest, whilst it was impossible to arrest other portions of it. With regard to the action of these very important substances, he referred them to table 2 (see below). If they wanted to grow grain by dung, they must use a great excess of potash, in order to get it to act properly—it would

not do merely to allow one ton of farmyard manure to one ton of cereal. As a great number of the farmers in Great Britain exported from their soils hardly anything else besides grain, they would see what an immense boon the introduction of guano was. Sometimes, however, they exported other substances besides grain, and as he was now in a potato-growing district perhaps he ought to refer to this particular kind of produce. The potash of one ton of potatoes and that in one ton of dung represented each other very closely. Yet although a ton of grain was a fair crop off an acre of land, a ton of potatoes was nothing at all—they would expect to have eight or nine tons. Therefore on an acre of potatoes he would say they should put 96 lbs. of potash. They would see that they could not use guano so liberally on potatoes as they could on grain because of the excess of potash which they had to deal with. It had been clearly demonstrated that the bulky manures were always good where they exported from the soil root crops, and although purchased dung would be dear to grow grain with, it was very cheap in the case of potatoes, potash forming a large item in grass and roots of all sorts. Wherever they exported root crops they must largely depend on the bulky manures, unless they chose to buy potash. At Rothamsted they had grown barley 25 years in succession, and the results of the produce were 48½ bushels of grain and 29½ cwt. of straw, where superphosphate and nitrate were used, as against 48½ bushels grain and 31½ cwt. straw, where potash had been used. Potash, if anything, gave the smallest grain produce, but, on the other hand, they got 2 cwt. more straw. On some soils it was nothing but a waste of time and power to put on potash, and they must always be guided by what was to be exported from the land. Referring to table No. 3, he pointed out that artificial manures contained the following substances: Nitrogen, as ammonia or nitric acid, phosphoric acid, soluble and insoluble, in combination with sulphate of lime, and but rarely potash. These artificial compounds were found to act as stimulants, supplying certain necessary ingredients to crops, and also enabling crops to gather up manure out of the soil, which would otherwise be wasted. Mineral superphosphate of lime, or what they called bone—burnt bone decomposed in phosphoric acid—supplied soluble phosphoric acid and gypsum. This had been used alone on land at Rothamsted for the last twenty to thirty years. In permanent root crops it was found that dung alone gave better results than dung and superphosphate. On permanent pasture the average of twenty years showed that not more than 1 cwt. of hay per acre was due to superphosphate. In the case of permanent wheat and barley, not more than from 3 to 5 bushels increase was attributable to superphosphate. It was only when they came to rotation that they saw the effects of using superphosphate. He then referred to the results of a thirty years' rotation of swedes, barley, beans, and wheat, with red clover instead of beans twice in the thirty years. The roots were consumed on the land without any other food. One rotation was unmanured the whole time, and in the other mineral superphosphate was added to the root crop every four years. The last produce of the four crops now beginning the eighth rotation was as follows:—

	Unmanured.	Superphosphate.
1876-7. Swedes	1 ton.	11 tons.
1875. Wheat	19½ bushels.	31½ bushels.
1874. Red clover	1 t. 8 cts. hay.	3 ts. 2 cts. hay.
1873. Barley	23 bushels.	29 bushels.

They would observe that the effect on red clover had been marvellous. The unmanured plant covered the ground, yet had no means of growing, and that grown with superphosphate trebled the crop. It might be partly accounted for by the fact that phosphates with soluble lime very much extended the roots, and during summer and autumn they picked up a great deal of food in the soil which would otherwise be washed out by winter rains. So far as this kind of produce was concerned, the idea that the crop took its ammonia from the atmosphere (which he was sure was not the case) was contradicted by the crop deriving food from the soil which was liable to be washed away by rains, while also laying hold of what was not so washed away. Root crops were very exhausting to the land; indeed his experience went to show that they were the most exhausting of all kinds of produce. The great difference between the clover crops and the slight difference noticeable in the bean crops were not easily explained, and it was not yet known how the leguminous plants took up their food. Speaking of the action of nitrogen, he observed that

this could not accumulate largely in the soil and be in a state of activity. Mineral manures, however, increased crops by enabling plants to gather up nitrogen from the soil which would otherwise be wasted, and nitrogen in manures added to the stock of nitrogen in the soil, thus assisting plants to obtain fresh supplies of food from the air. He then submitted the following general conclusions arrived at by experiments:— 1. That a mineral superphosphate of lime has given a considerable increase in each crop of a rotation, although used without any other manure, for a period of thirty years. 2. That in consequence of grain containing large quantities of nitrogen and phosphoric acid and small quantities of potash, manures containing soluble phosphoric acid and soluble nitrogen, as ammonia or nitric acid, are especially applicable to these crops. 3. That when crops containing large quantities of potash, such as roots, potatoes, and hay, are sold off the farm, manures containing potash, such as purchased dung, appear to be more suitable. 4. That although potash, phosphoric acid, and nitrogen are the chief ingredients in farmyard dung, the manure from artificial food and in artificial manures, still the difference in form in which these substances are met with greatly affect their value; the present method of analysing manures does not properly recognise these distinctions, and the valuations founded upon these analyses are altogether false and erroneous.

Discussion having been invited,

Mr. HARVEY, Whittingham, observed that in that part of the country they had great difficulty in growing a bean crop without farmyard manure—a circumstance which Mr. Lawes might be able to explain.

Mr. LAWES, in reply, said he had been silent on the subject of these crops, because he was very ignorant about them. It was not because he had not tried to grow them, for he had spent the best part of his life trying to get a clear knowledge of how these substances take their food out of the soil, and he was almost as ignorant now as before. At Rothamsted they had, he dared say, spent £10,000 in this investigation, but they could not put their hands on the substances which this crop took out of the soil, particularly red clover. They had had beans under experiments for thirty years, but could not produce what they would call a big crop, and still less of red clover, by means of a chemical compound. When they did discover the secret connected with the growth of the crop, it was not probable that it would be in the form of a manure which they could purchase and apply. It appeared probable that certain changes took place in the soil during long periods, and substances were formed, the composition of which they did not know. That would be seen by his reference to the thirty years' rotation; still he could offer no solution of this difficulty. He was obliged to say he knew nothing about the growth of bean crops.

Mr. CHRISTIE, West Maine, submitted, in the absence of Mr. Paton, Standingstones, a series of questions on paper for Mr. Lawes to answer.

The CHAIRMAN remarked, with reference to the growth of beans, that it would be well if they could know why beans were not grown so well now as thirty years ago. He recollected beans grown on his farm in the Abbey which were the pride of his father (who, considering he was an old soldier, was as good an agriculturist as most). Those beans were six feet in height, and one was lost almost in going among them. They were, moreover, podded from top to bottom, and they were considered the best in the world.

A VOICE: It would not have carried that every year.

Mr. LAWES said these leguminous crops had an aversion to ammonia, but did not dislike nitrate of soda so much, and he believed the use of ammonia might have something to do with the fact of their not now growing bean crops so well.

Mr. SMITH, Whittingham, said his experience of beans went to show that they got a better crop of beans where the straw was in medium quantity than where straw was very luxuriant.

A FARMER rose and said he once laid out £40 on 14 acres, and he thought he had thrown away his £40.

Mr. LAWES then replied to the questions handed to him on behalf of Mr. Paton, Standingstones. The first was whether Mr. Lawes could tell why superphosphate grows turnips, and even potatoes, so well in many parts of England, when they in East Lothian, with what might be said to be much better or richer soils, found that it did comparatively little good? They would observe that he had almost answered that question

in relating his experiments of the great results from superphosphate on land never dunged. Where they had put a quantity of dung on roots every year, superphosphate had done rather more harm than good. The higher they farmed in rotation, there was the less necessity for superphosphate of lime, which enabled plants to gather residue from a soil when it would otherwise not obtain the residue. Superphosphate of lime had been the making of Cornwall, for example. With corn after corn, and corn after corn, they would find it very valuable to gather and utilise a quantity of soluble ammonia or nitric acid. They would obtain a better crop from superphosphate of lime and nitrate of soda than from soda only. The second question was—Can Mr. Lawes give us a reason why in this country, even on the superior or richer soils, a mixture of nitrate of soda and superphosphate—analysing the same as Peruvian or Ichaboe guano—does not give such good results as the latter? Mr. Lawes said that he was not sure that this was not due to the superior qualities of nitrate of soda, which, however, required great care in its use. From its extreme solubility it was apt to be washed away, and was apt to overgrow their crops unless carefully used, though one of the finest manures. Their crop must, he thought, take the bulk of its food as nitrate of soda in some form, because ammonia did not diffuse through the soil till it became converted into nitric acid. Ammonia combined with the soil, but plants could only get hold of it when close to it, and directly it got hold of nitric acid it went all over the soil. More experience in the use of nitrate of soda would probably make them think better of it. At Rothamsted, where both kinds had been tried, they preferred nitrate of soda to ammonia, as giving better crops, whether of roots, grass, or corn. The third and last question on the paper submitted was—Seeing that no manure has yet been found to equal guano for the stronger soils of East Lothian, and, as this manure is always getting scarcer, what would Mr. Lawes recommend as the best substitute, bearing in mind that superphosphate is of comparatively little value on the soils of East Lothian? That question, Mr. Lawes remarked, was almost answered in what we had just said. So long as they could get guano with 10 or 15 per cent. of ammonia they could not have much better manure than that—the only fault was that very little could be got containing that quantity. They might get one, two, three and twelve per cent. of ammonia, every cargo varied, and it was a question what they got. If they went to artificial manure of some sort they must resort to nitric acid, which was a very forcing manure, and must be used carefully. He could not, however, say what the results in their case might be.

Mr. STEIN, Broomhouse, understood Mr. Lawes to speak of the special necessity of a large quantity of farmyard manure being used for potatoes. There was a practice occasionally tried in that county (where potatoes were of great value) whereby they grew turnips, ate them all off the field, and then took potatoes, with the addition of some artificial manures. He desired to know how that would affect the fertility of the soil, or how it could be maintained in the frequent recurrence of such a course of cropping?

Mr. LAWES replied that when a crop of roots was thus eaten off the land the export was small, and they had afterwards pretty much the same substance. A great deal depended on how they manured their turnip crop. With a late dressing of superphosphate of lime they might not perhaps have enough potash to carry them through, and, as a rule, whenever they exported root crop from the soil they must look to potash as being an important item, whether in the form of dung or in artificial manures. Unless the soil was of a very rich kind they could not trust to anything like guano, and they had to guard against a loss of ammonia, which was liable to be washed away by winter rains. He was quite sure from his own experience that he would grow as big a crop and bigger than they did without ever putting on dung. It was not a question whether they could do this or not, but whether it would pay them to do it. Potash was not a very dear thing to buy, but it might be a question whether it was economy to buy dung. Dung would be dear for some crops and cheap for others—dear, if they were to grow only corn crops, but possibly cheap with root crops, if these were to be sold. It was simply a question as to what was economy in agriculture, and without a special case a general opinion on the matter could not be given.

Mr. RICHARDSON, Morham Maine, referring to the danger alleged to exist as to the mixing of nitrate of soda and super-

phosphate, desired to know what would be a safe plan of mixing in view of the chemical change which took place?

Mr. LAWES referred to two plans for doing this. In the case of barley, the whole of the manure, superphosphate of lime and nitrate of soda were mixed and thrown over the land before it was ploughed. That plan was the one first adopted, and it had been continued at Rothamsted, as they did not like to alter anything so as to destroy the harmony of the experiments. On his own farm he mixed superphosphate and nitrate of soda and sowed them broadcast behind the drill.

Mr. RICHARDSON asked how long the ingredients lay mixed before being used?

Mr. LAWES said they were generally mixed as they went round the field. It was not safe to mix large quantities together, however. He had never known of combustion, but he should not like to mix 100 lbs. together, in case of producing what was called spontaneous combustion. In farming light land with a rocky sub-soil, there was a danger of a lot going off by washing. With sandy or shallow soil he preferred to wait until the crop was fairly growing before adding nitrate of soda.

Mr. ROBERTSON, Newmains, asked what class of land Mr. Lawes experimented on.

Mr. LAWES stated that it had a subsoil of yellow clay, below that about 9 feet being chalk.

A VOICE: Does Mr. Lawes approve of covered courts?

Mr. LAWES: I approve of everything that saves manure if that is the object.

A VOICE: Is this country for the last six months we have had something like running streams from our courts.

Mr. LAWES said no doubt covered courts would ensure a great saving of straw and a great saving of manure. The more they economised in this respect the less they needed to buy; there could be no question as to that.

A question was asked as to the relative value of ammonia from phosphates and coprolites. They had been given to understand that their chemical value was the same, but practically it had been found that ammonia from phosphates was the more valuable of the two. The source made a great difference in the money value of the article, and many were perplexed to know whether they were better to invest in the cheaper phosphates, or in the more expensive one.

Mr. LAWES said it would probably occupy them a whole day were he to give them the different sources of ammonia. It assumed exceedingly different forms of solubility, and it was highly unsatisfactory for any one merely to put this substance into a red-hot tube, and say it yielded ammonia—it might yield this 30 years hence. Some of the forms in which it occurred never yielded ammonia till after a lapse of about eight years, others yielded it the very next day, and some within 24 hours. It was obvious that the form in which ammonia could be more quickly had was more valuable than that which did yield it for several years. As time was of great value to them, this was a very important consideration. All these substances, however, had their value, and no human being had been able accurately to estimate this value, because he did not know when it would come out. Rape cake he had found to operate quite as well as the salts of ammonia, and he had used it for barley growing these twenty-five years. It decayed rapidly, and they got out the ammonia at once, but they could not say this of every substance. Bones, again, on some soils never decomposed, while on soils of a different character they decomposed as rapidly as sugar in water. Guano, too, was a substance affording a ready form of ammonia, and, like salts of ammonia or nitric acid, had a higher value than substances that were slowly formed. Dung, he pointed out, had not a higher value than artificial compounds that make dung, and they would give more for the three substances, potash, phosphoric acid, and nitrogen, than for dung. They did not value dung merely for the sake of price, and they knew that if they used dung they must use a great deal more of it, because they could not get its constituents to come out as readily, owing to their insolubility. It was a question not settled yet whether, when these substances were added in dung, or added in chemical salt representing dung, the ultimate crop would be bigger in one case than in the other. They could not tell which yielded most or where there was the greatest loss. The first crops would be better, no doubt, where the chemical manures went, but he believed that, like the race between the hare and the tortoise, they would not be able to settle the question at first,

and might have to wait for a lapse of twenty years to see which ingredient yielded most.

In reply to a question whether soluble phosphate was derived from a mineral source or bone,

Mr. LAWES said bone-ash was a mineral phosphate, and nothing else. He would not make a distinction between them; they could not consider that a bone burnt could be a bone any longer, any more than they would look upon a man after he was burnt as being a man. The nitrogenous matter in the case of bone disappeared with this process, leaving soluble phosphate and nothing else. Bone had 45 per cent. of ammonia and possessed a high value. It was in the proportion to nitrogen of phosphate in bone, but they would require a great deal more nitrogen with phosphate. Allowing 5 per cent. nitrogen to 50 per cent. phosphate in bone, they needed more than 50 per cent. bone to nitrogen. There was more nitrogen than phosphoric acid in corn, therefore bone was not suitable for corn unless they added large quantities of ammonia.

Mr. SCOTT, Beauston: Am I right with regard to superphosphate, that it is a great assistant to the turnip crop in its early stages?

Mr. LAWES said it was, no doubt, a very important thing for this crop. Its value was immense where it could be used, and good results had been got on highly cultivated farms.

In reply to a question as to how much potash should be applied per acre,

Mr. LAWES said muriate of potash contained one-half of absolute potash. Three cwt. would be a large dressing for a root crop, and it was not usual to put on more. If, however, they did not export roots, they did not want potash.

Another question asked was: In what form does potash occur in farmyard manure?

Mr. LAWES: Partly soluble and partly insoluble.

Mr. F. MUIRHEAD asked whether Mr. Lawes attributed any value to the mechanical action of dung upon the soil.

Mr. LAWES said in the distributing of manures it was of importance that the same amount of matter should be spread all over the land. The more they used chemical salts the more they required careful distribution. At Rothamsted they were nearly driven frantic about this, as it was difficult to get the small quantities properly distributed by machine or hand. For the last twenty or thirty years they had been always finding fault with their men in regard to irregular distribution. If they desired nitrate of soda to have full effect every single square foot should have the same amount put on it. They must meet this difficulty by throwing in added waste, so that what the man threw badly one way he might throw better the other way; still they must suffer very much from bad distribution.

The CHAIRMAN moved a vote of thanks to Mr. Lawes for the kind and explicit manner in which he had gone through every single subject which the meeting had been pleased to lay before him. It was very seldom that they had such an agricultural treat as they had had for the last hour and a half and it would be of great importance if they could have occasional visits from Mr. Lawes, just to tell them what he thought during the time he had been away. He (the chairman) had received a message from Lord Wemyss, expressing regret that, owing to extreme indisposition, he was not able to take the chair that day.

The motion having been cordially agreed to,

Mr. LAWES, in acknowledging the compliment, said, though he was a scientific farmer, he had some amount of practical experience, having taken a farm in 1834, since which time he had held a very large farm, which he had carried on so as to lose as little money as possible. He did not think he would make a very bad practical farmer were he to settle among them to-morrow. He did not object, however, to a little science in these days of what was called artificial farming. They made a great many mistakes in these days, which might be rectified if they knew the science of farming. A number of foreign countries were paying more attention to this subject than they were now doing at home. France, Germany, the United States, and one or two other countries, were now paying greater attention to this science than they had ever done, and watched very closely its progress. He should not like to see his countrymen falling back in this race now going on in the world, and he thought the tenantry, in whose hands

was the produce of the land, required to know far more of the science of agriculture than they knew at present.

This having terminated the proceedings, the meeting dispersed.

The following are the tables referred to in the course of Mr. Lawes' lecture:—

TABLE I. Farmyard Manure without Purchased Food, Average Composition, One Ton contains—				
Organic matter	...	...	5½ cwt.	
Mineral matter	...	...	0½ "	
Total dry matter	...	...	6 cwt.	
Water	...	...	14 "	
Total	...	...	20 cwt.	
Selected Constituents.				
Potash	...	...	11 lbs.	
Phosphoric acid, reckoned as phosphate of lime	...	...	8 "	
Nitrogen	...	...	12 "	
Total	...	...	31 lbs.	

TABLE II.
Comparison between 1 ton farmyard manure and 1 ton produce—

	Potash. 11 lbs.	Phosphoric acid as phosphate lime. 8 lbs.	Nitrogen. 12 lbs.
1 ton farmyard manure	11 "	35 "	40 to 45 lbs.
1 ton cereal grain	11 "	35 "	40 to 45 lbs.
Grain more or less than manure	0	+27	+28 or +33
1 ton farmyard manure	11	8	12
1 ton potatoes	12	8	8
More or less than manure	+1	0	—4

TABLE III.
Comparison between 8 tons potatoes and farmyard manure containing the same potash—

	Potash. 96 lbs.	Phosphoric acid as phosphate lime. 70 lbs.	Nitrogen. 105 lbs.
8½ tons farmyard manure	96 lbs.	70 lbs.	105 lbs.
8 tons potatoes	96 "	64 "	64 "
Potatoes less than manure	0 lbs.	6 lbs.	41 lbs.

BRITISH DAIRY FARMERS' ASSOCIATION.

COMMITTEE MEETING.

July 28.—A meeting of the Committee of this Association was held at Mr. Raffety's office, Agricultural Hall, Islington, London, N., to-day, at 3 P.M. Present: Mr. G. T. Jackson, in the chair, Messrs. J. H. Raffety, John Whittaker, Matthew Walker, and Henry F. Moore, the Hon. Secretary.

Letters of apology for non-attendance were read from Mr. J. G. Crompton, the President of the Association, Messrs. J. P. Sheldon, and R. Porteous. A letter announcing the death, on June 22 last, of Mr. James Dumbrell, of Ditchling, Sussex, a member of the Committee was also read.

The Hon. Secretary announced that the Association was making satisfactory progress, and that its members now included not only some of our best English agriculturists, but also representative men in Germany, Russia, Bavaria, Holland, and the United States of America. The actual number of members was 177. After paying all expenses they had £29 in hand, and there were unpaid subscriptions to the amount of £12 still owing. He read the names of the following new members:

Bland, Vladimir, Moscow, Russia.
Bourne, John, Rectory Farm, Muckleston-street, Market Drayton.

Breggen, Ph. Van der, Haddinsveen, near Gouda, Holland.
Brough, W., Buxton-road, Leek, Stoke-on-Trent.
Broughton, E. D. Wastaston Hall, Nantwich, Cheshire.
Byrd, David, Sparaton Hall, Tarporley.
Chawner, jun., H., Houndhill, Uttoxeter.
Darling, John, Bean Desert, Rugeley.
Eastly, John, Hibernian Chambers, E.C.
Eastwood, F., Clifton-terrace, Ashton, Preston.
Gibbs and Co., J., 16, Mark-lane, E.C.
Gillings, W., 35, Church-street, Lisson-grove.
Kirsh, Adolphus, Nicola Railway Station, Zawidowo, Russia.
Klenze, Dr. de, Ph. D., M.A., Weinstephan, Friesing, Bavaria.
McAdam, J., Craigplook, Kirkcubright.
Shiroboroff, Leonia, Msta Station, Rybinako, Bologowskay, Russia.
Simpson, G., Wray Park, Reigate.
Terntown, Adolphus, Smolenak, Russia.
Treadwell, John, Upper Winchenden, Aylebury.
Vereshagen, Nicholas, Nicola Railway Station, Zawidowo, Russia.
Warren, Stokes, and Co., 4, Beresford-place, Dublin.
Wenogradoff, Paul, Vologdalay, Russia.

LONDON DAIRY SHOW.—A long discussion took place as to what part the Association would take in the forthcoming dairy show at the Agricultural Hall, Islington, in October next; and what certificates, medals, or prizes the Association would offer. It was ultimately decided to offer silver medals in the cheese and butter classes, and certificates of merit to the makers of any praiseworthy samples in those classes. A sub-committee, consisting of the London members of the Committee and the Hon. Secretary, was appointed to arrange details.

OTHER DAIRY SHOWS.—It was afterwards decided to offer two silver medals and certificates of merit to the makers at the Frome Show, and the same at the Kilmarnock Show, subject, of course, to the approval of the Frome and Ayrshire Agricultural Societies. It was also decided that the Association should be represented at those shows.

THE JOURNAL OF THE ASSOCIATION.—It was resolved to publish this at 2s. 6d. to non-members. Mr. John Whittaker and Mr. H. F. Moore were asked to prepare for it a full report of last year's London Dairy Show, with a list of the awards.

THE LATE MR. J. DUMBRILL.—A minute, expressing the regret with which the Committee heard of the death of Mr. James Dumbrell, who took a great interest in the formation and work of the Association, was passed.

The name of Lord Richard Howe Browne was added to the list of members of the Committee.

A vote of thanks to the Chairman closed the proceedings.

THE NORTH-EAST AGRICULTURAL ASSOCIATION OF IRELAND.—At a meeting of this society on July 28, the Rev. Joseph Bradshaw observed that the Central Chamber of Agriculture and other agricultural societies had passed resolutions in favour of a total prohibition against importing foreign cattle into this country. It appeared to be the opinion of those societies that this was the only means by which the country would be kept effectually free from cattle plague, and it seemed to him that an association of such importance as this should give expression to its opinion on the subject, and he, therefore, moved that, "In the opinion of this committee, all cattle imported into this country from the European Continent should be slaughtered at the port of embarkation, as this course would benefit the producers and consumers of meat, inasmuch as freedom from disease is most conducive to the plentiful production of animal food, and therefore to its cheapness." The motion was seconded by George Allen, Esq., and unanimously adopted. The committee then adjourned, as usual, till the second Friday in October.

LOFTUS AGRICULTURAL SHOW.—The eighth annual show of the Loftus Agricultural Society was held on July 28, in a field on the estate of the Earl of Zetland, occupied by Mr. Prestwick.

REPORT OF THE CATTLE PLAGUE COMMITTEE.

The following is the full text of the report of the Select Committee appointed to inquire into the causes of the recent outbreak of Cattle Plague, and the measures taken for its repression; and into the effect which the importation of live foreign animals has upon the introduction of disease into this country, and upon the supply and price of food:—

1. Your Committee have examined witnesses from the Privy Council Department and representatives of the different trades affected, as well as of the agricultural interest, and have taken much evidence as to the dead meat trade recently established with America, and the supply of food to the manufacturing towns.

2. They have had before them the evidence taken upon this subject by the Committee of 1873, and their report.

3. Your Committee will first consider the question of cattle plague.

4. They have carefully gone into the causes of the recent outbreak, and have ascertained that the disease was imported by animals arriving from Hamburg before the authorities here had any official intimation of the outbreak at that place. They are glad to be able to report that they are satisfied by the evidence that, with proper regulations, cattle plague might be stamped out in a short time, and that no ground really exists for the fear of its becoming as destructive as it was in 1865. But the existing provisions, whether for its prevention or for its suppression, require considerable improvement.

5. With respect to the risk of introduction of disease into this kingdom, serious difficulties must always surround the importation of cattle from abroad, especially from a country like Germany, with a long exposed frontier. In such a case no measures short of prohibition would give the necessary security; whilst as to other countries the evidence leaves no doubt as to the necessity of foreign Governments imposing stricter regulations on their export trade in live stock, and especially providing that notice of any outbreak of cattle plague shall be forthwith communicated by telegraph to the authorities of this country. These are matters which should be made the subject of international arrangement.

6. With regard to home arrangements, the recent outbreak in this country suffices to prove that the system under which the powers of dealing with disease are, in the first instance, committed to the local authority, does not work satisfactorily, and that the powers of the Privy Council should, in every instance, be exercised at the earliest moment, and that, with this view, it should be the duty of the local authority at once to inform the Privy Council of any outbreak of the malady.

7. That the power to order the slaughter of suspected animals should extend to animals on premises adjoining to those actually infected, seems as necessary to your Committee as it did to the Committee of 1873.

8. Your Committee are also of opinion that further indemnification should be held out to owners of stock to report the first appearance of the cattle plague amongst their stock. At present, whilst one-half of the value is paid as compensation for any animal actually diseased, only three-quarters is allowed for an animal slaughtered on suspicion. Your Committee consider that in the latter case the full value should be paid, subject only to a maximum of £10.

9. Lastly, your Committee recommend that all compensation for the slaughter of animals on account of cattle plague, whether such animals are actually diseased or only suspected, should in future be defrayed out of imperial and not, as now, out of local funds. This change in the incidence of the charge is almost a necessary consequence of the change previously recommended, under which the order for slaughter will, in all cases, proceed from the central instead of the local authority; but apart from this it appears justified by considerations of public expediency. The rapidity with which cattle plague, if left unchecked, spreads far and wide makes it a matter of general concern that measures should be immediately taken for its suppression. Experience has shown that it can with certainty be suppressed by the slaughter of all animals within the zone of suspicion, and by no other course; and further, that if the case is promptly dealt with, the limits of this zone are comparatively narrow. The order for the neces-

sary slaughter is therefore one which should be made without hesitation, and any compensation which in consequence becomes payable may be deemed a cheap insurance against what would otherwise become a national misfortune.

10. But cattle plague is not the only question. It was abundantly proved in evidence that the ravages of cattle plague since the Act of 1869, and the diminution of the breeding herds of the kingdom from the fear of breaking out of cattle plague, are as nothing compared with the losses inflicted and the enterprise checked by pleuro-pneumonia and foot-and-mouth complaint. In addition to the losses to the community of animals actually destroyed by either of those diseases, or slaughtered to prevent the spread of pleuro-pneumonia, the agricultural and other witnesses laid great stress on the fact, that whatever loss fell upon the farmer from the deterioration of his stock through foot-and-mouth complaint, reacted injuriously on the consumer, by the diminution in the number of fat stock which the farmer was able to place on the market in a given time.

11. One witness, it is true, Mr. Gebhart, questioned the capability of the grazing lands of the country to support herds much larger than those which now exist; but in this view he stood alone. Witnesses with practical experience like Mr. Booth, Mr. Clare Read, Mr. Jacob Wilson, Mr. James Howard, Mr. Adam Smith, and the President of the Scotch Chamber of Commerce, Mr. Melvin, all agreed that if immunity from these two scourges were assured beforehand, such an increase might be anticipated in the breeding herds as would in the course of a certain time be large enough to make up for whatever diminution of supply might be occasioned by any new restrictions on the import from foreign countries.

12. Both these diseases are attributed to foreign origin; at all events, it was admitted that they are widely prevalent in some countries from which importation now takes place; and the number of cargoes stopped at the ports on account of disease having been actually discovered in the animals when landed, justifies the opinion that in many other cases animals really contagious are passed by the inspectors at the ports, owing to the voyage having been too short to allow the malady to develop to that stage where it is open to detection. This is more especially the case in pleuro-pneumonia, which has often been known to lie dormant for periods varying from two to three months.

13. If, however, it was proved how inseparable from the importation of foreign cattle is the risk of the introduction of these two diseases, it was shown beyond a doubt, that at the present moment they both exist so largely in this country that unless further restrictions are applied to the movements of our home stock, no restrictions on the foreign trade can give the least hope of the eradication of these diseases which is the necessary condition of any adequate development of the home supply. In fact it was admitted by every witness that if these diseases are to be stamped out, both kinds of restrictions were equally indispensable.

14. In the opinion, therefore, of your Committee, the first matter to be decided really is, whether the farmers of this country are prepared to submit to the inconvenience of such home regulations as may be found to be requisite. Should this be the case, then, and then only, would arise the further question as to whether new restrictions should be placed on the foreign import.

15. Adopting this order, your Committee proceed to consider the home regulations which the various witnesses insisted upon as necessary.

16. On this point, Professor Brown expressed a very strong opinion, that whether for the purpose of dealing with cattle plague, should it arise, or of stamping out pleuro-pneumonia and foot-and-mouth disease, one of the most important amendments of the existing system would be the establishment of uniform regulations applicable to the whole country, such regulations to be issued by the Privy Council, and to be carried out by Privy Council inspectors stationed in each district.

17. So far as relates to the necessity of uniform rules to be issued by the central authority, Professor Brown's views were strongly supported by Lord Fitzhardinge, Mr. Rea, Mr. Wilson, Mr. Stratton, Mr. Adam Smith, Mr. Melvin, Mr. Souby,

and Mr. Clare Read, on the part of the agricultural interests, by Mr. Tisdall, representing the Dairymen's Society; by Mr. G. Blitt and Mr. Lambert, two salesmen; and by Mr. P. Rudkin, on the part of the market authority of the city of London. The evils of the present want of uniformity were forcibly illustrated by Mr. Wilson's description of the different regulations which had recently prevailed at the meeting point of the districts of three local authorities at Newcastle.

18. But when it came to that part of the suggestion which placed the appointment of the local inspectors in the central authority, the witnesses were not so unanimous. Lord Fitzharding, Mr. Res, Mr. Wilson, Mr. Adam Smith, Mr. Tisdall, and Mr. Stratton were of opinion that if, as they suggested, the central authority were to make regulations for the whole of the country, the central authority should also, in order to ensure their regulations being carried out, have the nomination of the inspectors. On the other hand, Mr. Melvin recommended that the localities should appoint their own inspectors as now, but that the Privy Council should have a travelling staff to see that these local inspectors properly carried out the rules, just as inspectors of the Local Government Board supervise the action of the local poor law authorities. Mr. C. Read supported the latter view, with the qualification that all local authorities in the same county should be united for the purpose of appointing inspectors, while Mr. James Howard and Mr. Soulby urged that the police, responsible, as they are to quarter sessions in counties and to town councils in boroughs, are sufficient to carry out any regulations, subject only to the intervention of the Privy Council in the case of a serious outbreak.

19. Your Committee are of opinion that the Privy Council could not undertake the work of local inspection throughout the kingdom, and agree with Mr. Melvin that the appointment of inspectors should rest with the local authority, subject to the supervision of the Privy Council.

20. But whatever difference of opinion existed as to the authority which should enforce the regulations, it was admitted that farmers would find themselves under a much stricter *regime* than that which has hitherto been in operation inasmuch as in every district where either pleuro-pneumonia or foot-and-mouth disease existed, all movement of cattle would be prohibited except under license; fairs and markets would be under similar restrictions, and absolute prohibition of movement would be enforced against infected farms for periods varying from two months in pleuro-pneumonia to 28 days in outbreaks of foot-and-mouth disease. Further, the same regulations would have to be extended to Ireland and the Channel Islands, or else animals brought by sea from those parts of the kingdom should not be permitted to be landed except at defined ports, where provision was made for subjecting them to proper inspection.

21. Upon the question whether such restrictions would be accepted, Professor Brown stated his own opinion to be that as these restrictions must be expected to be stamped out, the country would not endure them, and would prefer the continuance of the disease to such a cure. Professor Brown, however, admitted that this opinion was not in accordance with what he had been informed were the views of agriculturists; and as a fact, with the one exception of Mr. Soulby, all the agricultural witnesses who appeared before your Committee—and many of them spoke as representatives of large bodies of farmers in various parts of the country—expressed themselves with confidence that, provided there was an assurance against the re-introduction of disease from abroad, these home relations would be willingly accepted by the farmers of the country.

22. And your Committee with this evidence before them can hardly resist the conclusion that such would be the case.

23. In the belief then that such regulations as have been indicated would be accepted by the home trade, your Committee pass to the question as to what additional restrictions to the foreign trade would have to be combined with such home regulations in order to give the requisite security.

24. The inspection of the ports being admittedly insufficient as a protection against pleuro-pneumonia, and uncertain even in the case of foot-and-mouth complaint, some witnesses advocated the total prohibition of live animals from abroad, suggesting their slaughter at the port of embarkation. But the greater number of the agricultural witnesses, includ-

ing Mr. Odams, Mr. James Howard, Mr. Melvin, Mr. Clare Read, admitted the difficulties of such a course, considering that the country was not prepared for so complete a change, and that the result might be to drive the foreign supply into other markets. They therefore preferred to advise the compulsory slaughter of imported animals at the port of debarkation, all countries, with the exception perhaps of America, being thus treated as scheduled countries are at the present moment.

25. A third proposal which was brought before your Committee was, that on the one hand, so far as regards Belgium and Germany, the importation from those countries of live cattle should be absolutely prohibited, and of live sheep should be allowed only on the condition that they should be slaughtered at the port of debarkation; and that, on the other, as to unscheduled countries, such as Spain, Portugal, and Denmark now are, all animals coming from there should be freely admitted into our ports, and allowed to pass inland, provided only that the Privy Council were satisfied with the precautionary regulations in force in such countries.

26. This suggestion as to the prohibition of the importation of cattle from Germany and Belgium, was founded on the extreme uncertainty of obtaining timely information here of any outbreak of disease in Germany, and on the consideration that Belgium is a transit country for German cattle.

27. On the whole, after considering the various alternatives, your Committee would recommend that, as a statutory arrangement, the importation of all animals from Russia, and all cattle from Germany (with the exception of Schleswig-Holstein) and Belgium, should be prohibited, and these last two countries as to other animals, and the rest of Europe as to all animals, should be added to the list of scheduled countries, with power to the Privy Council to forbid the importation of animals from other countries if they think fit.

And all fat cattle imported therefrom should be slaughtered at the port, such ports being defined, of debarkation; and that all store, or dairy, cattle should be quarantined for 14 days at certain defined ports of lading. Such stock on removal, to be registered as to where sent, and there to be under restraint and immovable for two months.

28. Your Committee believe that these combined restrictions at the ports and inland, would succeed, if enforced, in stamping out these diseases, and assuming this to be the case, the great question would still remain how far the result would affect the supply of meat to the country, especially to large manufacturing towns.

29. It was acknowledged that to bring about such an increase in the home supply as the witnesses anticipated from the greater security against these complaints, must take time; and the foreign importers and salesmen who opposed these restrictions asserted, as they did in 1873, that any such interference with the present established trade as would arise from slaughter at the ports would drive the foreign trade to other markets, and thus not only reduce the supply and make meat dearer, but in the interval before the promised increase in the home stock had been realised, raise the price of meat unduly in many of our inland towns.

30. On the other hand, many practical witnesses assured your Committee that instead of diminishing and driving away the supply, the establishment of any fixed rule rendering slaughter at the port compulsory would really increase the number and the quality of the animals sent. They pointed out that the present regulations are not favourable to the exporter. The fact that if on the arrival of his cargo at the port of debarkation disease is detected he has to reship his animals and take them on to Deptford, or some other port for immediate slaughter, renders him at all times uncertain of his market, and frequently puts him to much expense. The same causes, in their opinion, operate injuriously to Deptford Market itself. The supply to that market mainly comes either from countries temporarily scheduled, i.e., countries from which cattle cannot be imported except into a port where provision is made for their immediate slaughter, or else from casual cargoes, which were originally consigned to other ports, but which on account of infection having broken out it has been necessary to bring on to Deptford for slaughter. The supply, therefore, is uncertain from day to day; buyers in consequence are not attracted, and from the want of competition, prices are irregular. If, on the other hand, it was once made a rule that all foreign animals are to be slaughtered on their arrival in port, it was

confidently asserted that a steady trade would arise, and competition be the same as at Islington Market; and in confirmation of this view it was shown that during the recent period of restrictions large supplies had been sent over with the full knowledge that the animals would be slaughtered at the port.

31. It was next objected, that even if the number of animals sent to this country was not diminished by the animals being slaughtered at the ports, the difficulties of carrying the animals from those ports as dead meat to the inland towns would in hot weather be so great as to deprive those towns of much of their present supply, more particularly in foreign sheep; and the butchers from northern towns especially urged that their trade could not be carried on unless they were able as now to take the live animals from the port of debarkation to their own slaughter-houses, there to be killed as wanted for their customers.

32. But the evidence given by Mr. Rudkin, strengthened as it was by that of the deputy Chairman of the Great Western Railway, Sir Alexander Wood, and other witnesses, led your Committee to believe that these fears are without foundation, that there is no real difficulty in the supply of dead meat, and, with proper arrangements, even of offal to those towns, and that for some time a dead-meat trade, especially in sheep, has been regularly carried on from Deptford Market all over the country, increasing since the restrictions were enforced. Dead sheep have been also sent in large numbers to Wales, not unfrequently coming back to London as Welsh mutton. And the fact that the Aberdeen supply of dead meat to the London market has of late largely increased (reaching an average of from 60 to 70 tons a day, even in hot weather), affords additional evidence in this direction.

33. Having, then, carefully considered the evidence, your Committee have arrived at the conclusion that compulsory slaughter, at the port of debarkation, is not likely to discourage foreign importation, or to diminish the supply of our large towns, or generally to raise the price of meat. The change, however, would be a considerable interference with the present system of trade carried on by butchers and salesmen. For this reason, and because proper arrangements would in many cases have to be made at the ports selected for debarkation, your Committee feel that it would be well to postpone the commencement of the change for a time sufficient to enable the necessary preparations to be carried out.

34. With regard to the importation of dead meat from America, as affecting this question, the evidence shows that there are hardly any limits to the amount of meat which can be imported from that country; that in cool weather the meat can without difficulty be delivered here in perfect order, and that with greater care in the packing, and with better arrangements for storage here, it could be brought over in the hottest months. American meat already forms a useful supplementary supply to the meat markets of this country, and in no very distant future will probably constitute a most important addition, and will materially aid the carrying out of such a system as your Committee have suggested above. But the trade is at present in too uncertain and experimental a condition to justify reliance upon it for an unfailing supply.

35. Another important recommendation which was suggested for checking the spread of these diseases was made by Mr. Rudkin, Mr. Gebhart, and other witnesses; viz., that cattle exposed in Islington Market should not be allowed to be removed for exposure in any other market. For this purpose, they proposed that all animals, on arriving at Islington, should be marked for slaughter, and that the making use of such market in other places, or the exposure in any other market of an animal so marked, should be prohibited under severe penalties. It was shown that this market is the hot-bed of various diseases, more especially that the lairs are tainted with the foot-and-mouth disease, and that it is the practice of small jobbers to buy fat beasts in this market in order to remove them for re-sale to some local market, where they are necessarily brought into contact with both fat and store stock, and thus become the means of setting up fresh sources of contagion in various parts of the country. These jobbers would no doubt be affected by the restriction proposed, but no loss would fall on either the producer or the consumer, and your Committee have no hesitation in recommending the change as one of considerable value.

36. In connection with this part of the subject, the attention of your Committee was also directed to the prevalence of

disease in the dairy sheds in the metropolis and large towns, and the great danger of contagion being carried from them into the markets, and thus spread throughout the country. The evidence showed the constantly-changing nature of the trade, that cows are sent into the markets on showing the least symptom of being affected, and their places filled by fresh stock. The danger from these sheds was strikingly proved by the last outbreak of cattle plague in London.

Much evidence has also been given as to the feasibility of superseding town dairies by milk from the country. It was proved that by far the larger part of the present supply of London was brought from dairy farms established for the purpose, often at a considerable distance from town; nor is there any reason to suppose that the milk thus supplied is inferior in quality. Mr. Tisdall, who appeared on the part of the Dairy Association, stated that there was no difference in the quality or the price of the milk produced as between his dairy at Epsom and his cow-shed in London, and admitted that the metropolitan supply from the country dairies arrived in perfect condition. From his evidence, your Committee were also led to believe that the Dairy Association were well aware of the dangers of infection from their town sheds, and were willing to submit to regulations and inspection. On the whole, notwithstanding much evidence against the continuance of dairy-sheds in large towns, your Committee are of opinion that if registration, a real inspection, and sufficient regulations as to the movement of animals to and from these places are enforced, they may be allowed to remain without danger to the public.

37. Your committee have already alluded to the necessity which, in event of the same regulations not being adopted in the three parts of the kingdom, which arise for defining ports in Great Britain, where alone animals from Ireland or the Channel Islands would be allowed to be imported by sea, and where they would be examined by an inspector before being suffered to pass inland. The evidence of Lord Fitzharding and Mr. Peters showed that it has occurred that infected animals from Ireland have been landed at a British port where there is no provision for inspection, and have been then driven through healthy districts to the various markets, and thus distributed throughout the country. Such a system your Committee feel could not be permitted to continue if, with a view to stamp out the diseases, Great Britain was subject to regulations controlling the movement of home stock, and adding permanently to the number of scheduled countries. And your Committee think it to be their duty, in view of the evidence which they have received, to recommend that a searching inquiry should be made into the subject of the transit of cattle from Ireland to the ports of Great Britain; into the provisions made for their reception at the ports of departure and of arrival, and into their treatment during the voyage.

38. In conclusion, your Committee recommend as follows:—

1. That as a statutory arrangement the importation of all animals from Russia, and of cattle from Germany (except Schleswig-Holstein) and Belgium, be prohibited, whilst that of other animals from these last two countries, and of all animals from the rest of Europe, should be subject to the provisions of the same schedule; power being reserved to the Privy Council to prohibit the importation of animals from other countries if they think fit. An exception, however, should be made in favour of store and dairy animals, provided they remain in quarantine for fourteen days, and afterwards are placed under inspection for two months.

2. That the Privy Council should be empowered to deal directly with the cattle plague whenever it appears in this country, and that for this purpose it should receive from the local authority immediate notice of every outbreak.

3. That the power to order the slaughter of animals suspected of cattle plague should extend to animals in premises adjoining to the infected premises.

4. That whilst the compensation for the slaughter of animals affected by cattle plague should remain as it is at present, the compensation for the slaughter of animals suspected of that disease should be the full value (not however exceeding £10).

5. That all compensation for the animals so slaughtered, whether diseased or suspected, should be defrayed from imperial funds.

6. That in case of pleuro-pneumonia or foot-and-mouth disease breaking out, the Privy Council should have power to fix the limits of the district which is to be treated as infected.

7. That uniform rules applicable to all districts declared infected should be issued by the Privy Council, but should be enforced by the local authority, subject to the supervision of the Privy Council.

8. That, in the case of pleuro-pneumonia, the compensation for the slaughter of animals, whether suspected or diseased, should be at the same rate as in the case of cattle plague, but should be payable out of local funds.

9. That stock exposed in Ilington Market should not be allowed to leave the metropolitan district alive.

10. That, in the metropolis and large towns, dairy and cattle sheds should be subject to registration, inspection, and regulations.

11. That the restrictions applicable to Great Britain should be extended to Ireland and the Channel Islands, or else that ports should be specified in Great Britain by the Privy Council, to which alone importation of live animals from Ireland and the Channel Islands should be lawful, the animals not being permitted to be taken inland unless examined and passed by a Privy Council Inspector at the port of debarkation.

12. And your Committee are of opinion that no further restrictions should be placed on the importation of foreign animals in respect to foot-and-mouth disease and pleuro-pneumonia, unless at the same time orders be enforced throughout Great Britain, that in every district where either pleuro-pneumonia or foot-and-mouth disease exists, and which has been declared by the Privy Council to be infected, all movement of cattle be prohibited except under license; that fairs and markets be under similar restrictions, and that absolute prohibition of movement be enforced against infected farms for periods varying from two months in pleuro-pneumonia, to twenty-eight days in outbreaks of foot-and-mouth disease.

13. That where required effect should be given by the Legislature to these recommendations.

25 July, 1877.

Professor Gamgee sends us the following letter addressed by him to the Editor of the *Manchester Guardian*:

SIR,—“If this is not Protection, the word has lost its old meaning.” With these words you condemn the best report ever yet drawn by a Parliamentary Committee on the question of cattle disease prevention.

The Right Hon. W. E. Forster, M.P., addressing an influential audience at Bradford, said he had the previous day been present at a meeting of the Cattle Plague Committee, at which, if he was not prepared to abnegate his functions, it was absolutely necessary for him to attend, in order to protect the interests of the large towns as against the agricultural interests.

It is twenty years since I was coolly informed by the farmers and cattle dealers of the North that to prevent the sale of diseased meat as human food was an unwarrantable interference with free trade, and with their necessary safety-valve or source of salvage when pestilence invaded their farmyards.

I had almost been driven into the veterinary profession because an elder brother had so distinguished himself as a medical student that an able surgeon considered him too good for the humble calling. My tastes were in the direction of a broader view than had ever been taken of the duties of those who made the diseases of animals their study. I was shocked at the idea that our remedy for disease was to eat diseased animals, and, in bold defiance of old advisers, I spared no time, no labour, no money, to ascertain the origin of the destructive diseases which condemned not only our poor but the rich to eat carrion. It was in 1862 that, through the influence of Mr. John Simon, the distinguished chief of the Medical Department of the Privy Council, I was enabled officially to report that prior to so-called free-trade in live animals our land was the healthiest in the wide world, and that the maladies so destructive to our live stock had been, and were always, the result of disease imports. The soundness and justice of my inferences were endorsed by Mr. Simon, and from that day to this—thanks, no doubt, to the influence of Mr. John Algonson Clarke and Chambers of Agriculture—thanks to a staunch Liberal and Free-trader, Mr. James Howard—thanks to an upright, incorruptible, and common-sense tenant-farmer member of the House, Mr. Clare Sewell Read, the truth has gained wide acceptance, and the cattle and sheep breeders and feeders of this country no longer say that plagues are inevitable dis-

pensations of Providence; but they do say, in unmistakable language, “We are willing to submit to any sacrifice for the prevention of preventible diseases and for the good of our country—we recognise that the sale of diseased animals as human food is a criminal act, and we desire the most stringent measures at home against disease, without asking for any—not for the slightest—restriction on the meat trade.”

It has not been my duty, and certainly not my policy, to rank myself either with the Liberal or the Conservative party on this question. From my experience, both parties have been equally slow to move in the direction indicated by scientific enquiries of the most comprehensive kind. The one person who understood the question best as Vice-President of the Privy Council was Mr. Austin Bruce—now Lord Aberdare—and I felt something of the same confidence when replying the other day to Sir Henry Selwin-Ibbetson, Bart., whose method of eliciting information was in striking contrast—at all events, so far as its influence on me was concerned—to that manifested on two occasions by Mr. Forster. I always have been and ever shall be, a Liberal of the most definite colour. I am not a farmer, and my life-long labours have been, in the interest of meat consumers and of the large cities in which I have lived. Can I be otherwise than an advanced Free-trader, and one of those who believe that “perfect freedom of industry” ensures, and can only ensure, the “blessings of plenty and of peace?”

The Cattle Plague Committee has not gone far enough; I am told they dare not. It was for this reason they did not endorse my recommendation—sure to be followed when the truth has been sufficiently disseminated—of the abolition of live stock imports, except in relation to breeding stock. And why did I recommend it? Because experience proves that trade must not be harassed by partial and fitful regulations. The meat trade, like the corn trade, should be free to the world, without enthusiastic policemen hunting down the London cows or daring a West Highland bull, and without an inspector searching for that which is present but not visible in the incubative stage of disease, and entailing delays, detentions, and uncertainty in the transference of animals from perfectly healthy homes through the centres of an infected cattle trade.

No trade ever has been so harassed and damaged by insufficient and unintelligible disease prevention measures as the trade in meat.

And why should it be so harassed? If we import wheat, we do not wish it—it would be manifestly foolish—in the condition of the perishable green-growing crop. We require the corn suitably garnered and well cared for in transport, and it is the trade in grain and not in standing crops which enables us to withstand the influences of bad trade so eloquently set forth by Mr. John Bright, at Bradford. Live cattle, sheep, and pigs in the holds of steamers suffer waste, and constitute the fertile soil for disease germs, the accumulation and propagation of which is inevitable in the international cattle trade as understood in the past. For twelve years I have been persistently advocating the transport of meat rather than live animals, and had our Government encouraged researches in this direction instead of wasting money on inspectors and clerks in an ill-conducted because ill-informed veterinary department, they might have ensured that the plan I carried out in Texas in 1868-9, of blowing cold air round the carcasses of animals would have brought down the price of meat even before the beneficial trade inaugurated by enterprising Americans. The work is done, and the great economy of carrying dead meat—let alone humanity—as against live animals will satisfy the wants of our islands and enhance their prosperity. It has however, been found, during the first 40 years of the century, that we can produce all the meat required, and sell it to consumers at a profit, at prices much lower than those now ruling. The only condition essential for this is not protection in the protectionist sense, but protection in Mr. Forster's sense. He has something to protect. He is to protect the interests of the large towns as against the agricultural interests. To protect the large towns and the agricultural community—to protect our country and all other countries—to protect the sacred interests of free trade we must arrest the ravages by disease at home and abroad. It is now easy, for the origin of cattle disease is known. The Russians are suffering from it, as did our forefathers when they fought. The cause of war was always the precursor of famine and cattle diseases. They are destroying cattle as well as men in the East, and the plague

germs now multiplying into a luxurious crop on the shores of the Danube will take a few more millions sterling out of our pockets if we are foolish enough to permit them.

I protest in the most solemn manner against class being pitted against class. The farmers, the landowners, the cattle breeders and feeders of this country have slowly but surely learnt that they have not been led in vain for 20 years past in the study of cattle pignora and their means of prevention. Self-interest has opened their eyes to great truths—truths that I call great because fundamental, and their recognition implies the good of all. What did the late Emperor Napoleon say to Richard Cobden? "The difficulty is this: the monopolists may be the few, the minority—their interests are not to be compared with those of the nation—but they are an organised body, a disciplined army, and the great consuming public is only a mob." It is our duty to enlighten the great consuming public on the meat question. Able political economists, eminent disciples of John Stuart Mill, have boldly endorsed my views, however much their first impressions may have been against me. I assert and vouch for the fact that the farmers are not in this case monopolists. It is unjust, unfair, and in-

jurious to the public interests to propagate such an impression, and I am quite sure you will, with your usual courtesy, enable me—not a farmer, but simply an expert devoted to the science of the question—to state my views to the people of Manchester and the North. We are either right or we are wrong; that can be determined, as it has been determined to the satisfaction of the best informed, by patient research and calm discussion. Your worthy Mayor in a very generous way offered me, some time since, the use of his parlour and promised to preside at any meeting destined to place this question fairly before the public men of your town. My time has been so fully occupied that I have not yet troubled him, but I take this opportunity publicly not only to thank him, but to ask him to name a day; and feeble as I may be in disputing with so great a champion as Mr. Forster, since he has undertaken to protect the interests of the large towns, I shall be happy to find him in our midst ready to annihilate me, or to become a convert to that doctrine which has now gained wide acceptance, viz., that Free Trade in disease is not Free Trade in meat.—I am, &c.,

JOHN GAMGEE.

Victoria Hotel, Southport, July 27.

AGRICULTURAL SOCIETIES.

CORK COUNTY.

This Show was held, as usual, in the Corn-market, on Tuesday, the 31st July, and although rather a poor show as to the number of entries, was yet distinguished by the presence of several really good animals in almost every class and section. The attendance seemed to be less than that of former years, judging by the ease with which one could move about, nothing like a crowd being collected around any animal or object, however interesting; and shy attendance tells greatly against this Show, as the receipts are of more than usual consequence to the Society, on account of the extreme poverty of the subscription list. So meagre are the amounts received from the gentlemen and farmers of this great county that this important Society, which has for its sole object the promotion of the leading interest, and that by which the bulk of the population obtain a living, has to struggle for very existence, and can only afford the miserable sum of £8 in each of the leading sections for Shorthorned bulls, £4 for cows and heifers; £10, in first and second prizes, for thoroughbred stallions, £9 in first and second prizes for each of the two sections devoted to cart-stallions, and £6 for draught-mares. Such prizes offer poor encouragement to owners of valuable stock, and the entries have dwindled to the lowest possible point consistent with holding a show at all, the first two sections being represented by only two animals each, the entire entries of stock being only 252. When things are at their worst, however, it is popularly supposed they will begin to mend, and the friends and well-wishers of this Society are in fair hopes that this will prove to be the case with it, and that a great improvement may be expected by the next meeting, as, principally by the exertions of the President, whose efforts in this direction have been most praiseworthy, about sixty new members have been added to the roll, most of them being men of some influence in the county, and largely connected with agriculture.

In the sections for Shorthorns the familiar names of J. Popham, Laragh-Bandon, Marmaduke Cramer, Kinsale, John Downing and Arthur J. Campbell, both from Fermoy, W. H. Massey, Macroom, and R. J. M. Gumbleton, Glenastore, appear as the leading prize-takers, the honours having been pretty fairly divided amongst them, and each having shown a few first-class animals. The Ayrshires were nearly all disqualified for want of merit, even the prize cow of last year's Royal being thus extinguished, although in full milk and blooming condition. After such treatment of exhibitors, it would be more courteous of

the managers of this Society to exclude this class altogether from their premium sheet, as it is quite evident that Ayrshires have been declining in popular favour for many years, and are scarcely to be found exactly pure, and when brought forward the slightest approach to a white nose is taken as evidence of an admixture of Shorthorn blood, and the animals are, as a necessary consequence, thrown out by the judges. In the next class, which was that for dairy cows, it was easy to see that the days of the Ayrshire in the south of Ireland are numbered, as far as utility is concerned, as the animals which filled it were all magnificent specimens of the half and three-quarter bred Shorthorns, useful both for the pail and shambles, each worth a large sum of money, alike a credit to the county which produced them and their owners, the leading exhibitors in this class being J. McDonnell Carrigaline, D. Driscoll, Blarney-road, and M. A. Forrest, Killeena, near Cork, names long and honourably associated with the cattle breeding and dairy business of the Cork district. In thoroughbred horses there were six entries, all being good animals, and difficult to place. Singularly enough, although the judges took a long time in examining and comparing the different horses, their award gave almost universal dissatisfaction, and the prize horse was scarcely looked at for the rest of the day, unless to pick out his deficiencies, which were principally a want of substance behind the shoulder, and somewhat eccentric action in trotting. Carlos, Mr. Smith Barry's horse, took first place certainly in the opinion of the judges, but Mr. Power's magnificent horse York was the popular favourite, and delighted the onlookers by his splendid action, grand quarters, and general appearance of unusual strength and display of muscle. In draught stallions, to which two sections were devoted, the Clydesdales and Suffolks had their usual, and as it would almost appear, their inevitable, trial of strength, the latter however, for the first time, getting the best of it by carrying off the challenge cup, Mr. Heffernan's Retaliation taking it from Mr. Irvine's Young Champion, who won it from an unusually large field at last year's Royal. Mr. Irvine's Prince Alford, a Clydesdale colt not quite three years old, took the first prize in his class, and was greatly admired, but the centre of attraction to the practical farmers, and indeed to the general sightseer, were the two Suffolks, Retaliation and King George, both the property of Mr. John Heffernan, Blarney, their noble proportions and enormous load of flesh, calling forth expressions of surprise and admiration from every visitor to this department.

The classes for sheep, comprising Leicester, border

Leicester, and short-woolled breeds, were moderately well-filled, and some highly-bred animals were exhibited, but the prize-takers were in general so artificially trimmed, and so forced out of all resemblance to a comfortable sheep, that had led an enjoyable existence on good, sound, and abundant pasture, and whose mutton would by-and-bye become profitable to the butcher and useful to the consumer, that comparatively little attention was paid to them by the practical men present nor yet by the general visitors, whose sympathies are more with a nicely mixed loin of mutton, than with a barrel of chandler's grease.

The implement and machinery departments were well represented, and formed a constant centre of attraction and interest, the Messrs. McKessie, of Camden Quay, whose 84 entries comprised everything new or useful, for field, farm, or garden, being the leading exhibitors in this most useful department.

GLOUCESTERSHIRE.

MEETING AT DURSLEY.

Are societies and secretaries bound irretrievably to a single day? If so, it is an exceeding pity. We will speak only of such cases as have affected our own enjoyment. In the first place that capital show of horses at Barnstaple (a young meeting which sprang at once into a full blaze of success, and promises to be a source not only of agreeable review, but of real usefulness to the country at large), was this time fixed during the Liverpool week. Then the Shropshire and West Midland was concurrent with the Worcestershire Show, the entries of the famous local cattle and sheep breeds especially being so curtailed at both places. Then this popular and successful Gloucestershire meeting is fixed for the same date as the Yorkshire and Glamorganshire, their respective entries being thus again most seriously diminished. Can nothing be done? *Verbum sap.* Anyhow we find ourselves at Dursley on the pleasantest of sloping lawns, studded with fine branching elms, beneath which the sightseers had seats to rest on from the sunshine, whilst their ears were regaled with the strains of Dan Godfrey's band. The upper end was girt in by the wooded acres of the famous Stinchcombe Hill, whereon, we doubt not, many a doating vixen read her playful cub's lecture on the approaching perils of the season, which Lord Fitzhardinge opens next Monday, as she took quiet stock of the crowded steeds in the ring and sheds of the tented plain below her lair. It was a rare good ring to try the powers of the competing horses, and many a fine specimen of hack and hunter had to resign all chance of the prize as his heart sank and his thigh muscle failed under strain of that oft repeated oval gallop. Lord Arthur Somerset, and that splendid horseman the Hon. Frederic Morgan, judged the hunters, the maxim of the last one being in all doubtful cases to mark the effect of protracted exertion on the style of going. Lots of horses can perform well for a short distance which a straight-necked fox would demoralise in an hour. But of the agricultural horses first. It is a good district for such as well, and the winner today is the roan stallion who was placed over a grand lot of competitors at the Hereford Meeting of the Bath and West of England Show. He was bred at Pershore. His head is plain, but he has plenty of bone, and walks much faster than any of his rivals. Lord Fitzhardinge's Clydesdale, a mealy bay, is neat and cobby, but decidedly slower in his walk than the winner. The judges, moreover, found his bone to be less. In his behalf it is to be observed that he was so ill an hour before he started for the show that they thought he must die. He is calculated to do great good in the district, having been selected of the sort on purpose to fit the requirements of the farmers here, who have their eye on cult-breeding to the laden

wains upon the streets of Bristol no less than to the cultivation of the bean-producing clay of the sticky Vale. There were several other very serviceable and well-turned horses shown of the sort—bay, brown, and blue roan. The cart mares and foals were not much thought of by the judges, although we must say we liked in her box, where alone we saw her, the first prize winner—a low and lengthy Clydesdale of Col. Loyd-Lindsay's, by name Rosa Bonheur. Mr. Stephen Davis's bay filly was a noble animal, of a good colour, well grown, and clever as a pony. Col. Lindsay shows some Suffolks of good character and substance, but over-matched in size by the winner. In the class of "Stallions for getting Hunters and Roadsters, &c." there were seven entries, and the animals shown were good. There was some outside astonishment at Siderolites not being placed first, considering his bone, size, and his performances on the turf. To get hunters, however, the authorities did not consider him adapted. The prize went to Lord Fitzhardinge's, Red Cloud, by Maccaroni, dam Potomac, by Newminster, whose look is rather that of the cover-side than of the race-course. His shoulders were condemned by the disappointed, but the slope of their central line is 45 deg., the orthodox angle, and as regards their thickness through at top, since the days of Eclipse, who could carry a firkin of butter before the saddle bow, all horsemen value the characteristic in infinite preference to the high fine-drawn withers that are useful to keep on the harness, but don't do in the drop leap. He has a sensible head. A beautiful head has the second prize winner, Hot Shot, whose grandeur is Touchstone, to whom he bears a remarkable likeness; but these beautiful heads are pronounced by an authority to be a defect in the hunter. Horses so favoured are more apt at the end of a long day to be "fixing their eyes upon the rider's boots than the coming fence." Such are the graphic words in which one of the judges conveyed his opinion under the thoughtful influence of the postprandial cheroot. Sixteen years of age this fiery horse kept leaping and prancing around. It is so wonder that his thighs are muscular. The hunter brood mares, half a score in number, were a composite class, some almost fitted for the cart and plough, and not one of that unmistakable mark which is pounced on at once by the judicial eye. Mr. Bick's Black Duchess was a roomy animal, but wanted style for her vocation. She was, however, set apart as reserve number. The first prize went to a dark cheanut, Cinderella, who has plenty of blood and bone, but looked somewhat ragged behind. We pass with pleasure to the next class—"Hunters of any age"—a very strong collection, as might be expected in the vicinity of so many famous packs, and which gave the judges some hours' hard work, for they did their work with stern and patient discrimination. The hopes of exhibitors, as the feelings of the lookers-on, were oftentimes excited to fever heat, but in vain. Mr. Crawshaw's renowned Barry, whose high action rather befits Rotten Row than stiff plough, was, after some time, dismissed. The first draft had been of the smaller ones amongst which a dapple brown mare (Lottery) of Mr. T. Master's, took our fancy much by her style of going both before and behind. There was evidently some good reason for her rejection which did not reach our eye or ear, for she had about the best hunter paces in the class, and was good-looking to boot. Mr. Toogood's black horse, Sambo, by Mainstay, looked a thorough workman, and had plenty of power. He was small for competition with others shown, and clasped his tail in so close as to disfigure his appearance. Mr. Peter's brown gelding went well. Mr. Godman's Torpedo was tall, and uneven in build, but wiry and blood-like. He had also the great advantage of being well-ridden. He was placed second. The unmistakable

prize horse was Mr. Taylor's grey, who had a fine front, but appeared to us outside to be flattish, as old Banker was, behind the saddle. His owner rode him in a surtout, which looked a kindred performance to Mr. Ward's jacket-flap trick when he has a darkish nose to disguise. The grey was bought out of an Irish drove after the pick was supposed to be gone. He is a rare, animal, we hear, across country. But his rider is not of the timid order. There was a handsome dapple bay carriage horse shown. Mr. Bowly had three stylish animals as usual to exhibit, and at one time we thought he was drawn for first and second. He eventually, however, got only "highly commended" and "commended" for two. Mr. Estcourt's old chestnut was much admired, and had a reputation, but to our eye went stiffly in the off-hock. In the "hunter class under five years old" Mr. Fletcher won with a powerful black that wanted turning to please the eye, but was full of substance and sufficient in quality. Mr. Bailey came second with his well known Precocity, whose gallop it is pleasant to view. This gentleman's hitherto successful hack, Peter, was discarded as lame, to his great disgust. He seems to have had a cut about the fetlock. There was a good exhibition of hacks equal to twelve stone, not exceeding fifteen hands. Mr. Stratton's prize horse, Larkspur, failed to catch the judges' eye, who put a chestnut first, and Mr. Borton's black second, both of which we had spotted in our book as winners ere they entered the ring. The ponies seemed a good lot. Mr. Bowly's Magnet went splendidly about the showyard, well ridden by a boy, although only reserve number. The judging we managed to miss.

What were shown as Hereford cattle were very good, the exhibition being confined, in four classes, to ten animals altogether. They were, however, all choice specimens. There was a good exhibition of Shorthorns, as became the county. Mr. Stratton's rich lump of meat, Protector, never looked better. He took first prize amongst the old bulls, and the champion prize as well. It was a creditable sight to see the three bulls advance as competitors for the champion prize, all good, and the property of one man, as were Mr. Stratton's Protector, Peal Diver, and Carbuacle. Colonel Kingscote's two bull calves were also capital, especially the winner of the second prize, Cowlip Boy. In fact, it was an excellent show of males. Lord Fitzhardinge won first prize for breeding cows and champion prize as well, with Rugia Niblett, by Royal Butterfly 20th (how these famous old sorts keep hatching out winners continually!). As proof of the quality of the cattle shown we read repeatedly on the catalogue page the suggestive title "Duke of Geneva." Mr. Ashby's heifer Innocence, by Telemachus 8rd, dam Inquiry, by 3rd Duke of Geneva, was a very good one, and stoutly contested the champion prize. Colonel Kingscote's heifer calf, Honey 60th, snatched first honours from the celebrated Seraphina Bella 4th, being all over an exceedingly true-built youngster.

The pigs of every grade were good, as were the Cotswold sheep. There were some Southdown rams from Kingscote that showed admirably all over, even beside Sir W. Throckmorton's Royal winner in that large Liverpool class.

PRIZE LIST.

HORSES.

CART HORSES.

Stallion.—First prize, £50, S. Davis, Woolashill, Pershore; second, Lord Fitzhardinge, Berkeley Castle, Berkeley.
Mare and foal.—First prize, Lieut-Colonel Loyd Lindsay, V.C., M.P., Lockinge-park, Wantage; second, W. J. Marsh, Lodge, near Berkeley.

Gelding or filly, under three years old.—First prize, S. Davis; second, J. B. Lane, Bengrove, Gloucester.

HUNTERS AND ROADSTERS, &c.

Stallion.—First prize, £50, Lord Fitzhardinge; second, £25, W. Wilson, Waltham.

Brood mare.—Prize, Captain F. Henry, Elmestree, Tetbury.

Hunter of any age.—First prize, T. Taylor, Turkdean, Northbeach; second, E. T. Goodman, Banks Fee, Moreton-in-Marsh.

Hunter, under five years old.—First prize, W. H. Fletcher, Shipton, near Andoversford; second, J. Pearce, Kingaweston, Bristol.

Hack equal to 15 stone, not exceeding 15 hands.—Prize withheld.

Hack equal to 12 stone, not exceeding 15 hands.—First prize, J. P. Downing, Stanton St. Quintin, Chippenham; second, W. Borton, Preston, Cirencester.

Pony, above 12 and under 13 hands.—First prize, H. Villar, Ch. rilton Kings, Cheltenham; second, W. Hewer, Sevenhampton, Highworth.

Pony, above 13 and under 14 hands.—First prize, J. L. Smith, Stonehouse; second, J. G. Palling, Castleton, Cardiff.

Pony, not exceeding 12 hands.—First prize, withheld; second, C. Chapman, Frocester Court, Stonehouse.

CATTLE.

SHORTHORNS.

Bull, above two years old.—First and champion prize for best male animal in Shorthorn classes, R. Stratton, Newport; second, G. Garne, Chipping Norton.

Bull, above one and under two years old.—First prize, R. Stratton; second, Lord Fitzhardinge, Berkeley Castle.

Bull calf, above six months and under one year old.—First prize, R. Stratton; second, Col. Kingscote, C.B., M.P., Kingscote.

Breeding cows.—First and champion prize, Lord Fitzhardinge; second, W. J. Marsh, Berkeley.

Heifer, under three years old.—Prize, G. Garne.

Heifer, under two years old.—First and reserved number, G. A. Ashby, Rugby; second, R. Stratton.

Heifer calf, above six months and under one year old.—First prize, Col. Kingscote, C.B., M.P.; second, Lord Sudeley, Winchcombe.

HEREFORDS.

Bull, above one year old.—First prize, Mrs. Edwards, Leominster; second, T. J. Carwardine, Leominster.

Cow or heifer, above one year old.—First prize, Mrs. Edwards; second, T. J. Carwardine.

Bull calf, above six months and under one year old.—First prize, T. J. Carwardine; second, T. Cadle, Longcroft.

Heifer calf, above six months and under one year old.—First prize, Mrs. Edwards; second, T. Cadle.

Three dairy cows.—First prize, R. Stratton; second, F. Harvey, Gloucester.

Bull, cow, and their offspring.—Prize, J. Bennett, Dursley.
Two dairy cows.—Prize, J. H. Knight, Wotton-under-Edge.

CHANNEL ISLANDS.

Bull, of any age.—Prize, J. B. Backler, Stroud.

Cow or heifer, in calf or in milk.—First and second prize, J. Buckman, Sherborne.

SHEEP.

LONG-WOOLS.

Shearling ram.—First prize, J. Gillett; second, R. Swanwick, Cirencester.

Ram, of any age.—First and second prize, R. Swanwick.

Five yearling ewes.—First prize, J. Gillett; second, H. E. Raynbird, Beasingstoke.

SHORT-WOOLS.

Shearling ram.—First and second prize, Sir N. W. Throckmorton, Bart., Faringdon.

Ram, of any age.—First and second prize, Colonel Kingscote, C.B., M.P.

Five yearling ewes.—First prize, Sir N. W. Throckmorton, Bart., M.P.; second, C. Chapman, Stonehouse.

Five cross-bred yearling ewes.—First prize, J. Bennett, Dursley; second, G. Harris, Dursley.

Five cross-bred shearling rams.—First prize, G. Harris; second, Mr. Richards, Dursley.

Five cross-bred ewe lambs.—Second prize, J. Bennett.

SHEPHERDS.

First prize, W. Sessions, shepherd to Mr. Henry Playne, Chalford, Stroud, reared 283 lambs from 191 ewes, up to 1st May, 1877; second, P. Carter, shepherd to Mr. W. Peacery, Chedglow, Tetbury, reared 286 lambs from 215 ewes, up to 1st May, 1877.

PIGS.

Under a year old.

Berkshire boar.—First prize, A. Stewart, Gloucester; second, Sir N. W. Throckmorton, Bart.

Boar of any other breed.—Prize withheld.

Berkshire sow.—First prize, W. Hower, Sevenhampton, Highworth; second, R. Swanwick.

Sow of any other breed.—First and second prizes, R. E. Duckering, Northope, Kirtton Lindsey.

Over a year old.

Berkshire boar.—First prize, W. Hower; second, A. Stewart.

Boar of any other breed.—First prize, Lord Moreton, Tortworth-court, Falfeld, R.S.O.

Berkshire sow.—First prize, R. Tommas; second, N. Benjafield, Molcombe, Shaftesbury.

Sow of any other breed.—First prize, Lord Moreton; second, R. E. Duckering.

Three sow pigs, of the same litter, under nine months old.—First prize, R. E. Duckering; second, W. P. Want, Dursley.

Sow and pigs.—First prize, R. Swanwick; second, A. Stewart.

CHEESE.

One cwt. thick cheese.—First prize, J. Padfield, Puddletown, Dorchester; second, S. M. Harding, Huish, Bristol.

One cwt. double cheese.—First prize, T. Gabb; second, G. Harris, Cam.

One cwt. thin cheese.—First prize, G. Harris; second, J. T. Hill, Whitminster.

BUTTER.

1½ lb. of butter.—First prize, C. Harris, Breadstone, Berkeley; second, J. Buxton, Dursley; third, T. Camm, Stinchcombe, Dursley.

IMPLEMENTS, &c.

First prize, R. A. Lister, Victoria Iron Works, Dursley; extra prize of £3, E. Humphries, Farnham; extra prize £2, of Robey and Co., engineers, Lincoln.

HIGHLAND—(Concluded from p. 157).

SHEEP.

Cheviots, which are placed first in the catalogue, were never been better represented. Mr. Thomas Welsh, Ernstone, came to the front with splendid aged rams of his own breeding. He took first and third honours; the former he secured by a beautiful three-shear, well backed and coated, and with a fine neck; the latter with a sheep having well covered frame of both mutton and wool, although wanting a little in gaiety. Mr. Thomas Elliot, Hindhope, secured the second, fourth, and fifth, with his excellent sheep, who were prize winners at Liverpool. Mr. James Archibald, Glengelt, was awarded the commended ticket with a sheep of fair shape and wool. The two-shearing rams were a good display, headed by a strongly quartered, beautifully-countenanced, and necked sheep belonging to Mr. James Brydon, Kinnelhead Moffat. Mr. Brydon had the second honours with a shapely, strongly constituted animal, while Mr. John Johnston, Archbank, had the third with a sheep of unusual size. In a good class of shearlings Mr. Herbert Brydon, Hurlestane Hope, was first with a sheep possessing abundance of fine mutton and wool, the former evenly laid on, and the latter nice and open. He secured by it the first prize for wool also. A good handler with, pleasing shape, was the Kinnelhead second sheep which was also commended for wool. Only third honours fell to the successful Liverpool sheep, belonging to Mr. Elliot. The ewe and gimmer sections were in merit and numbers an admirable display. The first ewes, well bred, large, and shapely, came from Glengelt. The Kinnelhead second

ewes might be considered quite as symmetrical as the former, although not having the same quantity of mutton or wool. The lambs of the latter, however, were deservedly first. Clearly first for gimmers were the Messrs. Archibald; their true symmetry, grand coat, and countenance not surpassed by even the Hindhope sheep, which came off victoriously at Liverpool. Mr. Elliot had to be pleased with second; and Mr. Brydon third. The blackfaced sheep were no less conspicuous for their merit and numbers; indeed, the shearing rams were the best ever seen at the Highland Show. With a splendidly coated, necked and quartered sheep, Mr. Foyer, Knowehead, took the premium honour. He also got third with a fairly shaped and covered sheep; while Mr. Fleming, Ploughland, had secured the honour preceding this with an animal of his own breeding, with sweet countenance, and well-developed quarters. Mr. John Archibald, Overshids, in the two-shear rams had no difficulty in coming first with his beautifully horned, distinctively coloured face, and flowing open coat. The other two next tickets went to Mr. Aiken, Listonskidd, with vigorous, well quartered sheep. In the shearing class individual merit was close, and the judges were some considerable time in deciding the positions of the animals, Mr. John Watson, with a large, well-woolled, finely-faced sheep, got first honour, and was commended, by the same sheep for wool. A finely-boned, symmetrical sheep from Dornat (Mr. Howatson) secured the second honour. The first prize for wool in this class went to Mr. Currie, Yorkston. This latter gentleman also got the premier ticket for the best pen of ewes, one or two of which were, as gimmers, prize winners at Aberdeen. Their ewes, strong and healthy, got second. In the gimmer class, which was a particularly strong one, Mr. Melrose, Westloch, was easy first, with large, well covered sheep, while Mr. Aitkin's sheep, though not so large but as symmetrical, were put second. The Border Leicesters were a splendid exhibition of grand, well-bred sheep; Mr. Purves, Caithness, was first in the aged ram class with a sheep of rare quality, with great length, but with moderate rib and coat. Messrs. Clarke's, Oldhamstocks, Mains, second ram had a better sprung rib, and better skin, although not so long in the hindquarters. The third sheep, belonging to Mr. Ainalie, Hillend, was a sheep of great loin, and fine general symmetry, and might easily have been placed further forward. He got, however, the special prize for the best wool. Mr. Richard Tweedie's large substantial sheep, who was first at the Royal, was left out in the cold, the judges here going in more for style and quality than weight of mutton or wool. The competition in the shearing tups is always an interesting part of the scene. The first prize, after a laborious shearing-down of a large splendid lot to one or two, was given to the Messrs. Clarke with grandly-girthing handling sheep, and with sweet head; while the second honour was given to Mr. Ferguson's (Kinnochloy) ram, with great length and size, but not so white and purely-woolled on the face as his more successful opponent, whom he gave a hard run for the first honour. Mr. Smith, of Castlemains, got third with a handsome sheep, but on the small side and a little lacking in depth of front. Mr. Melvin's sheep, who were at the Royal and took prizes, did not come into the list; they did not appear to be looking so well as at the Liverpool meeting. Mr. Nisbet, Lambden, came out strongly in the ewe classes, as he always does. His first sheep were an even lot, all the animals being lengthy and shapely. Great abundance of mutton, well carried, especially over the loin, rib, and front, were the characteristics of the Forrest sheep, which got second. The Messrs. Clarke's gimmers were clearly first, although the judges took considerable time to give them first position; but this was, we believe,

owing to one of the judges having a fancy for the Marquis of Tweeddale's lot, which were not nearly so handsome on most points as the Oldhamstocks sheep. The gimmers of Mr. Melvin, which got nothing at the Royal, got third here. As usual, the Rosevalley Leicesters carried off most of the honours in the sections of this breed; the Cotswolds from Woolmet, and Lincolns from Tinwald Downs, and the Shropshires from Latimer, took the same prominent positions in their respective breeds.

HORSES.

As indicated before, the display of Clydesdales was unusually grand. In the aged stallions Mr. Riddle's Darnby, which has twice been first in the same class at Glasgow, was selected for the first ticket. This animal is admirably put together, and has a fine head and neck, and clean, strong bone. In short, he possesses a great deal of Clydesdale character which is seldom found in one horse. Ivanhoe, belonging to Mr. Crawford, Strathblane, was put second, and had taken a similar honour at the Glasgow Stallion Show last spring. Ivanhoe is a nicely-pasterned and buttocked horse, with great muscle and bone. Mr. Riddell's Paisley, which was so successful at Liverpool, only got third, but although he gave Ivanhoe a good heat for his position, Paisley, we understand, has been sold at a sum bordering on £600 to go to Australia. A large and magnificent class was the three-year-old colts. Prince George Frederick, belonging to Mr. Weir, East Kilbride, was put first here, as at Glasgow in May last. He has well-developed muscle, fine strong bone, and good action. Mr. Weir bought him when a yearling from the breeder, Mr. Martin, Auchendennan, at 500 gu.; since then he has taken many prizes. Mr. Lawson, Deebank, was second with a handsome, strongly-built horse. Mr. Houldsworth's third horse by Prince of Wales was bred by Mr. Peter Brown, is beautifully coupled and nicely-boned, and was first last year as a yearling. The two-year-old colts were a large and fine class. The bay colt which was first at Glasgow, Ayr, and Liverpool came in easily for the first honour, while the Kilwinning colt got second, with well-built frame, powerful limbs, and pleasing action. Mr. Crawford's colt, which was third here, was first as a yearling at Glasgow, and commended at that city last May. In the yearling colt class the colt which Mr. Riddell bought from Drew, and which is by Prince of Wales, got first, while Mr. Brewster got third, Sir Stirling Maxwell fourth, and Colonel Williamson, of Lawers, commended, with remarkably strong, promising animals. Colonel Williamson's yearling colt, we understand, was sold to Lord Dunmore for £500, which is about the largest price given for a yearling. The mare class, although not large, comprised some animals of great merit and celebrity. Mr. W. Henderson Hardie, Borrowston Main, had the first award given him for Rance, a dark brown mare of five years old, which had Black Prince for her sire. She has splendid fore-legs and feet, and is altogether well proportioned. At her foot is a very fine strong foal of nine weeks old. Rance has taken many prizes in the course of her lifetime. She ranked first as a one-year-old and two-year-old respectively at the Highland and Agricultural Society's Shows in Stirling and Inverness, was second when a three-year-old at the Society's Glasgow Show, and fourth last year at Aberdeen. In the course of this summer she has taken first prizes at Ayr and Glasgow, and yesterday regained the reputation with which she set out in life, standing as she now does first in her section. Kelso Maggie, a splendid animal, belonging to Mr. Thompson, Baillie Kuowe, and bred by Mr. Symington, Kirkcarsewell, was placed second; and the Dora of Mr. John Hendrie, Kirkwood, a dark brown mare of twelve years old, bred by Mr. Todd, Auchlauch, stood third, though

in the opinion of some she might have been placed higher. Maggie, which was shown by Mr. David Buchanan, Garscadden Mains, at Aberdeen in 1876, with foal at foot, and obtained the first prize, is forward now for the silver medal, and was also entered in the section for aged mares in foal. Here, however, she has to be content with third honours, the first place being given to Netty, a beautiful bay of four years, belonging to Sir William Stirling-Maxwell. Netty was bought for Sir William from the Merryton stud in the spring at the price of 595 guineas. She has been a very extensive prize-taker. In Northumberland last year she beat this year's prize mare at Liverpool. Mr. Drew was placed second with Sheba, a chestnut of six years old. In the section of three-year-old fillies Mr. Houldsworth, Coltness, again figured to advantage. His Sally, a very handsome animal, with a good free action, bred by Sir Wm. Stirling-Maxwell, gained the first prize, repeating the honours she had previously won. At various important shows she has during the last two years secured no fewer than fourteen first prize tickets. At Glasgow, besides gaining the first prize in her section, she carried off the £20 silver cup for the best mare or filly in the show; she was first in the aged class even at Hamilton, and got, in addition to the first prize in her section, a silver medal offered for the best horse in the show. Mr. Alexander Baird, of Urie, won the second prize with Jess, which was bred by Mr. Steel, Lochwood; and Mr. Adam Smith, Stevenson Mains, obtained the third prize with Milly. In the competitions with younger fillies the principal awards fell to Mr. J. M. Martin's Damsel, the Earl of Strathmore's Beas, bred by Mr. W. Whyte, Hatton, Glamis; the Jean of Mr. Baird of Urie, bred by Mr. Muirhead, Meikle Richorn; and the Jessy of Mr. Young, Hamilton Farm, Cambuslang. There was a very large show of hunters and roadsters, but as a class they do not by any means come up to the same standpoint of excellence as the Clydesdales. There was a small show of ponies. Among the number, however, were the first prize stallion at Aberdeen of the Duke of Athole, "Glengarry," which is now shown for the medium gold medal; and the first prize mare at the same exhibition of Mr. Baird of Urie, also now brought forward for the medal.

PIGS.

In the swine department, in which there was a smaller display than on some previous occasions, the Earl of Ellesmere, as usual, carried off most of the leading prizes with splendidly fed and bred pigs. In the poultry classes there were not much competition and large numbers, but the display was signalised by the presence of one or two birds of great merit.

Financially the Edinburgh Show has proved the most successful the Society has had. The total drawing was £6,717; while those at Glasgow, two years ago, were £6,231, which up to the present time had been the highest attained.

IMPLEMENT AWARDS.

The following are some of the implement awards: The Minor Gold Medal was awarded to Stand No. 91, Wm. Lincoln and Co., for No. 875, self-sustaining screw pulley, block, &c., invented by Wm. Thompson and Co. Glasgow. Silver medals were awarded to the following: Stand No. 98, Robey and Co., Lincoln, for No. 899, self-acting circular-saw bench. Stand No. 100, John Williams and Son, Rhinddlan, Rhyl, for No. 901, patent chaff-cutter, invented by John Whittaker. Stand No. 87, George Hathaway, Chippenham, Wilts, for barrel churn with Archimedean dasher and metallic mouth. The following were recommended for trial: Stand No. 80, Brigham and Co., Berwick, for Nos. 821 and 822,

turnip shaver and rooter; and No. 823, turnip thinner, invented by exhibitor. Stand No. 83, J. L. Catchpole, Framden, Stonham, Suffolk, for Nos. 829 and 880, patent corn and seed separator, invented by exhibitor. Stand No. 85, John Gregory, Westoe, South Shields, for No. 833, turnip topping and tailing machine. Stand No. 88, Houghton and Thomson, Carlisle, for Nos. 871 and 882, adjustable horse rakes, invented by exhibitor. Stand No. 90, J. and H. Keyworth and Co., 35, Tarleton-street, Liverpool, for No. 874, the anchor self-discharging hay rake, invented by the exhibitor.

THE CLYDESDALE HORSE SOCIETY.

The Clydesdale Horse Society, which has been recently originated, held its first general meeting in the showyard on the Wednesday. Lord Dunmore, who has taken an active interest in its formation, as well as in the proposed publication of the Clydesdale Stud Book, which is one of the objects of the Society, occupied the chair. Amongst the gentlemen present at the meeting were—The Hon. Waldegrave Lealie, Colonel Williamson, of Lawers, Mr. Jacob Wilton, Woodhouse Manor, Morpeth; Mr. James Grahame, Purcelston; Mr. Richard Tweedie, The Forest, Yorkshire; Mr. John Marr, Kingnodie; Mr. David Walker, Millbank; Mr. James McQueen, Crofts; Jacob Menzies, Kelso Mains; Duncan McFarlane, Torr, Helensburgh; Mr. John Thomson, Bailieknowes, Kelso; Mr. Robert Mowbray, Cambus, &c. The business of the meeting was to receive the report of the Council held already that day, and to appoint auditors.

The Council minutes, which Lord Dunmore read, bore that it was resolved that the Editing Committee should consist of five members, and that the following gentlemen were appointed:—Lord Dunmore, Mr. Martin, Mr. Young, Kier Mains; Mr. Oliphant Brown, Shiel; and Mr. Keen, Lamloch. The General Purpose Committee of seven members was appointed, among whom were—Lord Dunmore, Colonel Williamson, of Lawers, Mr. Smith, Stevenson Mains; and Mr. Clay, jun., Kercheesters. The limitation of the number of life members was fixed. Lord Dunmore stated that he had secured 92 life governors as members of the society at 10 guineas, which represented nearly £1,000 to start with. (Applause.) The Council had appointed Mr. Blyth, accountant, as auditor, Mr. Henry as treasurer, and Mr. Thos. Dykes, Glasgow, as secretary. Mr. Duncan McFarlane moved the adoption of the report, which was seconded by Mr. Grahame, and unanimously agreed to. Lord Dunmore moved a vote of thanks to Mr. Henry for the valuable assistance that he had given him in the collection of pedigrees, and who had given the use of his office in Glasgow as the registered office of the Society. Colonel Williamson, of Lawers, proposed a vote of thanks to Lord Dunmore for his great labours in connection with the Society, and the courtesy and consideration he had shown to all who had had intercourse with him in connection with the prospective Stud-Book. Mr. Jacob Wilson bore testimony to the great amount of labour which his Lordship had in connection with the preparation of the Clydesdale Stud Book, and the energy and perseverance with which it was performed. They were told that they would get no funds, but the fact that they had got ninety-two life governors, representing nearly £1,000, showed that the matter had been gone about in a proper way. Lord Dunmore, in replying to the vote of thanks, said they had £1,200 of funds at present, and owing to his undertaking the expense of the first volume himself, there would be very little expense for some time to come. He had two clerks at home in London with himself busy working among bundles of pedigrees. He had, on the suggestion of some parties, extended the time of receiving pedigrees

to the 1st of August; but horses which were not entered by the 1st of August for the first volume could be entered in a subsequent volume, so that every bred Clydesdale horse would be entered in the Stud-Book some time or other. He could not say when the Stud-Book would be ready, but that would depend a great deal upon the breeders. He would not, however, attempt to print it until it had been approved of by the Editing Committee. In answer to a gentleman present, his Lordship stated it was intended to enter mares and their produce in the next volume. This concluded the proceedings.

ROYAL OF ENGLAND.

Monthly Council, Wednesday, August 1st, 1877.

Present: Lord Skelmersdale in the chair, the Earl of Powis, Lord Chesham, Lord Easington, M.P., Sir A. K. Macdonald, Bart., Mr. J. H. Arkwright, Mr. Aveling, Mr. Cantrell, Mr. Leeds, Mr. Martin, Mr. Randell, Mr. Ransome, Mr. Sanday, Mr. Shuttleworth, Mr. George Turner, and Dr. Voelcker.

The following new members were elected:—

Abbot, Thomas, of Newark-on-Trent.
Blackstock, A. D., of Hayton Castle, Maryport.
Bousfield, Edward, of Newark.
Campbell, Archibald, of Vulcan Iron Works, Thrapstone.
Campbell, Murdoch, of Clourcher Castle, Maryborough, Queen's Co.
Carlisle, H. N., of Row End Farm, Markgate Street, Dunstable.
Cartwright, Thomas, of The Buildings Farm, West Felton, R.S.O., Salop.
Clayden, Charles, of Maunden, Bishop Stortford.
Conwy, Major Conwy Rowley, of Bodrhyddan, Rhyl.
Cranfield, W. N., of Morton Grange, Retford.
Forwood, Thos. B., of Thornton Manor, Neston, Chester.
Franks, Matthew H., of Westfield, Mountrath, Queen's Co.
Gartakell, John, of Hall Santon, Holmrook, Carnarvon.
Gardiner, Robert, of Birchgrove, Aberyath.
Gardner, Wm. H., of Llannerfyl, Welshpool.
Gregson, S. Leigh, of Overton Hall, Malpas.
Grylle, Thomas Henry, of Tiscall Cottage, Stafford.
Hudson, James, of St. Andrew's Place, Penrith.
Hughes, Thomas, of Maesbury House, Oswestry.
Hughes, T. H. E., of Neuadd-fawr, Lampeter.
Joicey, J. G., of Newcastle-on-Tyne.
Marshall, Richard H., of Treonon, St. Mawgan, St. Columb, Cornwall.
Morris, Edward Rowley, of Homestay, Newtown, Mont.
Neale, Melville T., of 2, Park Villas West, Richmond, Surrey.
Nightingale, William Rimell, of Bishampton, Pembro.
Ormiston, John, of Wigfair, St. Asaph.
Parkin, William, of Blaithwaite, Aspatria.
Payne, James, of Thornhill, Dumfries.
Pickstone, William, of Macmynan Hall, Holywell.
Pilkington, George, of Stoneleigh, Woolton, Liverpool.
Pryer, Frederick, of Davington, Faversham.
Pye-Smith, Arthur, of St. Pancras Iron Works, St. Pancras Road, N.W.
Reeves, Charles, of Manor Farm, Woburn, Bedfordshire.
Rogers, Edward, of White Rock, Llanymynech, Mont.
Shepherd, Arthur, of Straw End, Kendal.
Smyth, Hugh Lyle, of Crabwell Hall, Chester.
Tod, A. J., of Woolton Grange, Woolton, Liverpool.
Williams, John, of Phoenix Iron Works, Rhuddlan, Rhyl.
Worthington, John, of Whalley Range, Manchester.

JOURNAL.—The Editor reported that he had received several of the papers for the memoir on British Agriculture to be laid before the Agricultural Congress to be held at Paris next year, and that the remainder of the papers had been promised to be delivered in a few days. This report was adopted.

FINANCE.—Mr. RANDELL presented the report, from which it appeared that the Secretary's receipt during the past month had been examined by the Committee, and by Messrs. Quilter, Ball and Co., the Society's account-

ants, and were found correct. The balance in the hands of the Society's bankers on July 31st was £8,090 7s. 7d., and at the Liverpool bankers £14,336 16s. 8d., the sum of £22,000 remaining on deposit.

The Committee recommended that £4,000 be invested in the new 5 per cents. This report was adopted.

GENERAL, BRISTOL.—Mr. RANDELL reported the recommendations of the Committee that the permanent buildings of the Society be placed upon some land in the neighbourhood of the show-yard, as there is a difficulty in placing them upon the show ground until next year; also that Mr. T. Dyke, of Ashton Lodge, who had been invited and had accepted the office of steward of forage for the Bristol meeting, be duly appointed as such; further, that the Secretary be authorised to accept offers of farm prizes by the Local Committee subject to the conditions being such as have been already approved by the Council. It was also recommended that in the arrangement of the show-yard at Bristol the possibility of separating miscellaneous machinery and non-agricultural exhibits from the implements and machinery which are purely agricultural be taken into consideration. This report was adopted.

It was reported that the following noblemen and gentlemen had been appointed a general Bristol Committee:

Stalmersdale, Lord (Chairman).	Jones, J. Bowen.
Bridport, Viscount.	Martin, J.
Cheham, Lord.	Mason, R. H.
Lopes, Sir Massey, Bart.	Milward, Richard.
Masgrave, Sir R., Bart.	Nichols, George.
Avelling, T.	Pole-Gell, H. Chandos.
Aylmer, H.	Randell, Charles.
Booth, T. C.	Ransome, R. G.
Bowly, Edward.	Rawlence, J.
Bristol, High Sheriff of.	Sanday, G. H.
Bristol, Mayor of.	Shuttleworth, J.
Cantrell, Charles S.	Stratton, R.
Dyke, T.	Thomas, Christopher J.
Egerton, Hon. W.	Turberville, Major Picton.
Frankish, W.	Turner, George.
Gibbs, B. T. Brandroth.	Turner, Jabez.
Hensley, J.	Wakfield, W. H.
Horley, T. jun.	Wells, W.
Hornaby, Richard.	Whitehead, Charles.
Jones, J. A.	Wilson, Jacob.

GENERAL, LIVERPOOL.—Mr. SHUTTLEWORTH presented the report of the Committee in reference to the accounts for the Liverpool meeting, which had been laid before the Committee, and which it was recommended should be paid. This report was adopted.

SHOWYARD CONTRACT.—Mr. SHUTTLEWORTH reported that the Committee had received a certificate from the Surveyor for the payment of £1,500 to Messrs. Fry and Sons, being the fourth instalment on account of the works at Liverpool, and they recommended that this amount be paid accordingly. They further recommended that Mr. Hunt's ordinary account for salary and expenses connected with the Liverpool meeting be paid. This report was adopted.

CATTLE PLAGUE.—The following report was received from Professor BROWN, and ordered to be published:—

An outbreak of cattle plague was discovered on July 14, on premises in Norfolk-street, Bethnal-green, among ten cows, all of which were found to be affected with the disease in various stages, and one, to which further reference will be made, died soon after the existence of the disease was detected. The animals were first seen by Mr. Shaw, the inspector of the local authority, and subsequently by the chief inspector of the Veterinary Department, and also by Professor Simonds, Mr. Priestman, and Mr. Rayment, inspector of the Metropolitan Market, all of whom agreed in the opinion that the symptoms and post-mortem appearances indicated cattle plague of the

most pronounced type. The true character of the disease having been determined, the source of the infection only remained to be investigated, and, considering that there was a long interval between the last outbreak and the one immediately preceding it, a suspicion of the re-introduction of contagion from abroad was immediately entertained. All the facts, however, are in opposition to this idea. Cattle from Germany and Belgium, the only countries through which cattle plague is likely to reach us, are excluded, and, further, it has been ascertained that no foreign animals had been recently introduced into the shed where the disease appeared. The only other assumption is that the contagium of cattle plague had been preserved in some way in the Bethnal-green district; and the inquiry which has been made has led to the discovery of circumstances which favour this view. Taken in the order of their occurrence, the facts are as follows:—The last reported case of cattle plague in the East of London occurred on May 17th. About that time there were eleven cows in the shed in Norfolk-street, where cattle plague had not, up to that time, broken out. Early in June pleuro-pneumonia was reported to exist in the dairy, and at the time of the inspector's visit only eight cows were in the shed; one of them was affected with lung disease, and was slaughtered. The missing cows had been sold, it was stated, to a butcher probably on account of pleuro-pneumonia. Seven cows remained apparently in good health, and towards the end of June a cow, the one which died of cattle plague on July 14, was added to the stock, and in the beginning of July two more were purchased, making the number up to ten which were in the shed when cattle plague was detected.

Suspicion was naturally directed to the three newly purchased cows, and an inquiry was at once instituted as to their origin. Two of them it was ascertained came from perfectly healthy premises on July 3rd; the other one has a history which quite justifies the assumption that it was infected when it was brought into the shed in Bethnal Green. The animal was purchased of a jobber and drover, who has a small slaughterhouse in Bethnal Green, where he disposes of such animals, cows chiefly, as he can purchase advantageously from time to time. It will not be unfair to suggest that during the existence of cattle plague in the district, many cows affected with the disease were killed and dressed in these premises. The cow in question was bought by the dealer at Romford Market, and put into the slaughter house for the purpose of being killed. On the following day the cow appeared to have a good bag of milk, and the dealer, instead of fulfilling his first intention, decided that the animal would be more valuable for dairy purposes, and accordingly he sold her to the dairyman in Norfolk-street, to whose shed she was taken direct from the slaughter house. The date of purchase of the cow has not been clearly made out. The drover asserts that he bought the animal on Wednesday, June 27th. The dairyman thinks that she came into his shed on June 23rd. It is a fact that she was ill on July 10th, and died on July 14th; and it is further certain that the disease had extended to all the animals in the shed when the first inspection was made. The whole history of the outbreak is quite consistent with the idea of an infected animal having been introduced into the shed about the end of June.

Every precaution has been taken to prevent the spreading of the disease. The slaughter house and premises from which the cow was taken have been disinfected, a district round the dairy has been declared an infected area, and the movement of cows out of any cow-shed in the area has been stopped. The order which prohibits the removal of cattle, sheep, and goats out of the metropolis still remains in force, and also the Order which makes the Metropolitan market a place for the sale of animals exclusively for slaughter.

Cattle plague has again appeared in Germany, near the Polish frontier, having been introduced, it is believed, by meat from Poland. Active measures have been taken by the German Government to prevent the extension of the disease.

Protests were read in reference to decisions of the stewards, veterinary inspectors, and judges at the Liverpool meeting. The Council in every case determined to uphold the conclusions already arrived at.

The following vote of thanks to the Council for their action in reference to cattle plague, which was passed at the general meeting of members held in the show yard at Liverpool was laid before the Council:—

Proposed by Mr. ALFRED ASHWORTH, seconded by E. W. MEADE WALDO, and carried unanimously:—"That the best thanks of the Society be given to the members of the Council, and especially to Mr. Booth, Mr. Wilson, and Mr. Jenkins for the great assistance they gave to the Parliamentary Cattle Plague Committee by obtaining evidence to be laid before it."

The Secretary was authorised to sign and seal an agreement with the Local Committee at Bristol.

Cordial votes of thanks were passed to the Head Constable of Liverpool, the Chief Constable of Lancashire, the Postmaster of Liverpool, and the Manchester and Liverpool District Bank, for their efficient assistance during the Liverpool meeting. It was moved by Mr. RANDALL, seconded by the Earl of Powis, and carried unanimously:—

"That, with the sanction of the Corporation of Liverpool, a timepiece, with a suitable inscription, be presented to Chief Superintendent Hancock, of the Liverpool Police, in recognition of his valuable services during the period of the Liverpool Show."

The following correspondence between the President of the Society and the Privy Council was then read:—
Royal Agricultural Society of England.

12, Hanover Square, London, W., July 6th, 1877.

MR LORD DUKES.—I have the honour to inform you that at the meeting of the Council of the Society held yesterday, a letter dated June 28th was read from the Clerk of the Council, stating that the report of the Colorado beetle having been found in a potato-field in the neighbourhood of Cologne, has been ascertained to be true, and detailing the steps which have been taken to prevent its spreading.

With this letter were sent twenty-five copies of a memorandum relating to the beetle by the Canadian Minister of Agriculture, together with an engraving of the insect; and it was stated that the Lords of the Council had caused these documents to be sent to all the ports in the kingdom, and to be otherwise widely circulated throughout the country; and further that the Commissioners of Customs had instructed their officers at the various ports to examine every cargo of potatoes from America and Germany with a view to prevent the introduction of the beetle into this country.

I was thereupon desired by the Council of the Society to call your attention to the fact that the introduction of the beetle is more to be dreaded in materials used for packing than with the potato. It appears that potatoes are imported from America in casks without packing, and during the winter and early spring when the beetle is hibernating and unlikely to be imported into Great Britain from that country. The Council of the Society were further of opinion that the document which had been issued by the Lords of the Council, giving figures of the beetle in its perfect stage only has not calculated to assist materially in its detection, as it would be much more likely to be introduced during the late spring and summer months in its larva or pupa state than as a perfect insect. They therefore desired me to urge upon the Government to distribute throughout the country figures of the insect in all its stages, and for this purpose to call your Grace's attention to the plate published in the Society's *Journal* for 1875, in illustration of a paper by Mr. Bates on the subject. A copy of this *Journal* I have the honour to enclose. I have the honour to be, my Lord Duke, your obedient servant,

(Signed) SKELMERDALE, President.

His Grace the Duke of Richmond and Gordon, K.G.

Privy Council Office, 7th July, 1877.

MR LORD.—I am directed by the Lord President of the Council to acknowledge the receipt of your lordship's letter of the 5th inst., and to request that you will be so good as to convey to the Council of the Royal Agricultural Society the expression of his Grace's thanks for the valuable suggestion contained in your letter, and for the copy of the Society's *Journal* which accompanied it.

The Lord President is most anxious that no effort should be spared to prevent the introduction of the Colorado beetle into this country, and his Grace has caused instructions to be issued for the exercise by the officers of the Customs of the

utmost possible vigilance in the examination of cargoes arriving from any ports from which the insects would be likely to arrive, with a view to their immediate destruction should they unfortunately make their appearance. His Grace is fully sensible of the importance of the suggestion contained in the last paragraph of your lordship's letter, and has given directions for the preparation and circulation of a drawing of the Beetle in all its stages of development similar to that contained in the volume you were so good as to send for his Grace's inspection.—I am, my lord, your obedient servant,
(Signed) C. L. PERL.

The Lord Skelmersdale, &c., &c.

Some applications having been received from landowners, who are members of the Society, for additional copies of the plate issued by the Society illustrating the Colorado beetle in its various stages of development, it was resolved, on the motion of Mr. Shuttleworth, that they be supplied to members of the Society at the rate of 5s. per hundred.

The SECRETARY laid before the Council a proposition by Mr. F. W. Reynolds, of the firm of Reynolds and Co., wood-working machinists, Southwark, who were exhibitors at Liverpool, suggesting that a subscription should be raised for the benefit of the widow and children of Mr. Isaac Wilson, who was accidentally killed in the Society's Show-yard at Liverpool by the bursting of an emery wheel, and requesting the Secretary to act as honorary treasurer. It was thereupon resolved unanimously that the Secretary be empowered to act in that capacity.

A letter was read from the Science and Art Department asking that the *Journals* of the Society from 1874, and in future as published, be presented to the library of that Department. This request was granted unanimously.

Letters suggesting prizes for potato-digging machines, horses to be exhibited in harness, and for Longhorns, were referred to the Implement and Stock Price Committee respectively.

A letter was read from Mr. SMITH, of Woolston, in reference to steam cultivation.

The usual holidays having been granted to the Secretary and Clerks, the Council adjourned over the recess until Wednesday, November 7th.

SHORT HORN.

A meeting of the Council of this Society was held at the Society's rooms, 12, Hanover-square, on Tuesday, July 31st. Present: Lord Skelmersdale, vice-president, in the chair.

The following new members were elected:—

Adkins, John Caleb, Mikoote, Stratford-on-Avon.
Brooke-Hunt, A. E., Peer's Court, Bursley, Gloucestershire.
Sutherland, Charles Leslie, Coombe, Croydon, Surrey.
Withington, Thomas Ellames, Holton Cottage, Wheatley, Oxon.

EDITING COMMITTEE.—The Earl of Dunmore reported that the whole of the pedigrees of bulls in Vol. 23 were in type, and that there was every probability of the volume being in the hands of the members by Christmas.

GENERAL PURPOSES COMMITTEE.—Mr. G. Munroe Tracy reported that the accounts for the month of July had been examined by Messrs. Quilter, Ball, and Co., and the Committee, and were found to be correct.

The Committee also reported that the Secretary's petty-cash account had been examined and passed, and showed an expenditure of £13 10s. 4d. during the past month; that the receipts for the month of July had been £62 17s. 6d., the balance of the Society's current account at the banker's being £2357 12s. 10d., and £500 as deposit.

The Committee recommended that cheques be drawn for various accounts and salaries, amounting to £173 18s. 2d.

The Committee also recommended the Council to as-

thorise the Secretary to seal, with the Society's seal, the power of attorney for the receiving of dividends by the London and Westminster Bank.

This report was adopted.

In accordance with the 11th article of association, on the motion of the Earl of Dunmore, seconded by Mr. G. Merton Tracy, Lord Skelmersdale was elected president of the Society for the ensuing year; and on the motion of Sir Wilfrid Lawson, Bart, seconded by Mr. Charles Howard, the Earl of Dunmore was elected vice-president of the Society for the ensuing year.

The Chairman, with much regret, reported the death of the Rev. J. N. Micklethwait, a member of the Council. Notice was given that at the next meeting of the Council a member would be elected to fill the vacancy caused thereby.

Leave of absence having been granted to the Secretary and Clerk, the Council adjourned over the recess until Tuesday, November 6th, at three p.m.

YORKSHIRE.

MEETING AT YORK.

Now that we ride without horses, and can go from London to York in one-fifth of the time it took in the days of stage coaches, and for a sum that a moderate toper of those times would have laid out in brandy and water for himself, the coachman, and guard, still fancy in her flights outstrips the rail and even the wires, as long before the train had reached the ancient city, through the soporific influence of heat combined with reading and travelling with our backs to the engine, we were comfortably seated in the coffee room of the Royal Station Hotel, where the waiter placing a smoking sirloin on a table announced that dinner was ready. "Booth or Bates? Where's the pedigree?" enquired we. But as no pedigree was forthcoming, or hide, although we insisted on seeing it, to ascertain whether the nose was black or flesh-coloured, the horse waxy, green or yellow, and with or without black tips, and the hair mossy, wavy, silky, curly, red, white, or roan, as we positively refused to touch a bit until we knew whether it was cut from a pure bred Booth or Bates animal, the waiter, after a time, ushered in the Patron and President of the Society, His Royal Highness the Prince of Wales, and the Right Hon. the Earl of Zetland, with the Members of the Council brought up by Mr. Parrington, the Secretary, and his assistant Mr. Stephenson, who, hats in hand, begged to assure us that it was pure Booth beef of the old Rose tribe (red or white), and consequently descended in a direct line from Julius Caesar or Belshazzar. Thanking his Royal Highness and the deputation very much, we, as they retreated backwards treading on one another's toes, politely bowed them out, and then were just going to make a slash in the beef when we were again awake to the realities of this every-day life by the cry of "Tickets, tickets." Aroused, we made for the excellent hotel we had been dreaming of, in time to secure a bed at ten-and-sixpence per night, including attendance, which was reasonable in comparison to what we and others have paid when attending the Yorkshire Shows; still, it is too much, and we think if the Yorkites really wished success to their admirably managed Exhibition they would have followed the example set by the good people of Birmingham, who, when the Royal was held there, agreed that not more than five shillings per night should be charged for a bed. Some leading Yorkite should have seen to this, and the city set an example to other Yorkshire towns, at which the Show is held, whose exorbitant charges are notorious, and a drag to the progress of a Society which has done and is striving to do their county some service, by keeping hundreds of exhibitors and others away. As he has not done so—

"Off with his head, and set it on York gates,
So that York may overlook the town of York."

The fortieth meeting of the Society commenced on July 31st, and was held on Knavesmire, a name given to the race-course by the good people of York in days when you could tell a rogue by the cut of his hair, that is, one just fresh from durance vile, but now, as we all go in for the close crop, it is impossible to tell who has escaped from Dartmoor, Hanwell, or from the many mansions we have for the poor. But we are wandering from the mire, which when saturated with rain, is heavy going, so that the rogue is easily distinguished from the stout-hearted, honest horse, and whereon Mr. Parrington for the second time during his stewardship, has laid out with artistic skill and taste the Society's tents and stabling. What an improvement it all is to that of Howden, in 1864, the year before Mr. Parrington took the reins, where half-a-dozen horses attached to a light beam by halters, having broken away with it from some hastily run-up shedding, might have been seen dancing amongst the company, and causing ladies and gentlemen of high degree to pick up their feet as if fine action as well as quality was essential to that state of life in which they were placed.

As a show of stock it was decidedly good, for the Shorthorns were excellent, though a few short in numbers of some other Shows; then the Leicesters and Lincolns were good, but the pigs miserable for Yorkshire, but this was owing to a change in the entry, which, instead of "under twelve months and over twelve months," as at previous Shows and the Royal, was "six months to twenty-four months old." The cart-horses were good, but not numerous, the coaching classes middling, the roadsters and hacks fairly represented, the thorough-bred stallions and the hunters very well, though the latter were not up to the form of many Shows we remember; while the ponies, as it came on a heavy storm on the second day, when they were being judged, we did not see much of. On the first day part of the riding classes were judged in one ring, and the cattle in an adjoining one behind the stand, and on the second day the remainder of the riding classes, the cart-horses, and coaching classes.

The judges were supplied with catalogues giving the names of the owner and the animal, which, as we have said before, is not quite our idea of a fair fight and no favour; nor do we see any reason for giving them. We should like to know one.

We will now run through the classes, beginning with the agricultural stallions above three years old, which had an entry of fourteen, but only seven in the flesh, the principal absentees being Le Bon, Young Samson, Simon Pure, and Beauchief. The victor turned up in the now famous Topsman—a horse of capital form, great power, and good action, who played second to Young Samson at Bath, and for the Champion Cup at the Royal, and who now had, as his second best man, our ancient friend Young Champion, with his white markings, and as well known in the ring as one of his judges is as a breeder of Shorthorns, the third being the compact and useful Champion Clydesdale by Conqueror, with Ambition by Heart of Oak, a very nice black cart-horse, from the same stable. There were seven, again, out of an entry of eleven, in the entire colts foaled in 1875, and the judges got a goosing for placing a nice small active Clydesdale—Souter Johnnie by Tam o'Shanter, out of Jess, which only came in for a commendation at the Royal among the Clydesdales—before the elect of all the Royal Shire colts, viz., Lord Ellesmere's powerful, big-boned colt, Samson the Second. He was also put before Topsman by Champion, the second at Bath and third at the Royal. Mr. H. Outhwaite's Yorkshire Champion, and Mr. Grave's Scotchman,

were fairly-made colts. The two-year-old agricultural geldings and fillies were a good class, but many could not see why the Royal verdict was reversed and given to Bonny, which, although a nice filly, was only commended at Liverpool. In fact, Lord Ellesmere's grey Marshland Princess was quite overlooked, although as sweet, compact, nice-moving filly as any one would wish to look at, and a first at Bath, and second at the Royal. She has changed hands since the Royal, and was only entered here as a "grey, sire England's Wonder." This omission might have had something to do with it; but mind, we don't say so, Fatima, a thick-set mare, by Honest Tom, and a third Royal being second. Mr. Tweedie's Nettle, Mr. Marster's Miss Wonder, and Lord Leconfield's bay by Royal Oak, we marked for something good. There were half-a-dozen useful agricultural geldings or fillies, the first being the strapping Lady Worsley, a Royal winner, and the second Honesty, though not so powerful, but a nice short-legged filly, by Honest Tom. Lord Leconfield's Bute was a good looking black. There were six out of seven capital cart mares, with foals at foot, and all pretty well known in the ring. Princess, a second at the Royal this year, with a grand foal by Honest Tom, was placed before Lord Ellesmere's first Royal, Honest Lady, which was only third, as Mrs. Muir, from the same stable, was now put before her, and Princess, also one of the Worsley string being highly commended. Mr. Statter's Royal Duchess, and Mr. Wright's thick-set chestnut mare make up the six. The following was at the bottom of the class, and applies to brood mares and foals of all breeds: "All foals must be the produce of the mares with which they are exhibited, and the judges in awarding the prizes for brood mares will be instructed to give due consideration to the quality and promise of the offspring." We think it would be more satisfactory to judges and exhibitors to give one of the prizes for foals solely, and the other two for the best mares, which is done at some Shews and approved of by many judges. The sixteen coaching stallions which came into the ring, with the exception of the couple selected by the judges, we thought had not quite fashion enough for the present day, although Penance is a wisely made three-year-old, showing plenty of breed combined with good action, and The Count is a four-year-old of power, but not showing so much quality as the victor, though a very useful horse and fair mover. Years ago, when hounds did not go the pace they do now, the Cavaliers, in the county of Durham, were used as hunters as well as to cut a dash in the family carriage, and to speed the plough; and now a colt or filly by a thoroughbred horse out of a Cleveland mare is so sweet to look upon in the eyes of some judges fond of flesh and substance rather than blood, that they have taken many a Yorkshire hunting prize. The best of the coaching brood mares was old Bonny, a beautifully made, short-legged mare, with a handsome one of nice form by Wonderful Lad as second best; while the third prize, Lady Jane, a brown, with Miss Pompey from Rerby, and Nance, of Dalton-on-Tees, were good. There were eight three-year-old coaching geldings, and three or four fillies, but nothing of any extraordinary merit, and half-a-dozen or so ordinary-looking two-year-old geldings with three useful fillies. There were twenty-two roadsters out of an entry of twenty-eight, but we looked in vain for such smart little merry-going nags as All Fours, a bay with four white heels, or one with the handsome cobby character and breed that Sir Edwin Landseer, a one-eyed black had, both of which, we think, were on Knavesmire when the Prince of Wales was at the Show in 1866, and half-a-guinea was charged a gentleman for sitting in an arm-chair that night at York. We fancy we see the late Professor Spooner looking over Sir Edwin Landseer, and

running his hand down his hocks, when he held the office that Mr. Pritchard now holds, and acts his part so unobtrusively. The first was Star of the East, a nag of power, and a grand goer that we have noticed several times since Skipton, when Mr. Holmes's, of Beverley. Sir Alfred is of a nice size, with quality and action, and so is Prime Minister, a very taking nag. Of the others we marked Mr. Laverack's Matchless, Mr. Leake's Young Lord Derby, Mr. Cousin's Weighton, Merrylegs, though rather over-topped, Mr. Collin's Charley Merrylegs, and Mr. Ellerby's King Christian as some of the best. The ten roadster brood mares, with several well known ones in, made a very fair class, and amongst those not in the prize list were Mr. Cook's Eclipse, Mr. Miller's Mabel Grey, and Mr. Wright's Polly Hawley. The hackney or roadster geldings and mares, from four to six years old up to fifteen stone, were five fair ones, the fight for the first honours being between Lady Wilton, shown by Mr. Hutchinson, and Mr. Robinson's Brownbell, both showing very well in the saddle, though when led we thought Brownbell did it a little the best, as she stopped as horses do when loose and startled. Still, it was hard to say which picked their legs up the highest, Brownbell or Lady Wilton, Mr. Robinson or Mr. Hutchinson. Our old friend Charles the Second was again first, and reminded us of the days of Hammering Polly, of Sledmere—a mare we often thought would require a new pair of forelegs every six months. Sir George—not any of the horses of that name, but the Lord of Newburgh Park—rode Sunabine, a very pretty clever hack, but a heavy storm coming on must have put the drag on to any pleasure there might be in riding about the river; but this is a matter of opinion, as, long after, Mr. Arkwright, though he must have been soaked, might have been seen riding the Duke of Hamilton's Bore round and round again and again, apparently as delighted as duck in a thunderstorm.

If one could only get perched up in a cloud, and see now we all manage to amuse ourselves during the day, what fun it would be! This struck us in the Grand Stand, when we were a notch or two above everyone, where there was a "cut-and-come-again, there-you-are and here-you-have-it luncheon," at three shillings per head—payable before sight!

In the thoroughbred stallions, four years old and upwards, suitable for propagating the breed of sound and stout horses for racing or stud purposes, of which there were eleven out of an entry of thirteen, the absentees being Vulcan and Merry Sunshine, the best was declared to be Citadel by Stockwell, out of Sortie by Melbourne, that we are tired of describing. The second best, King Lad, by King Tom, out of Qui Vive, by Veltigour, a horse that has done some racing, and that every one was talking about, but that we should not have picked out as anything very grand, as he struck us as being light and leggy, with not the best of fore-legs, and though racing-like, not at present a show horse; but we had not time to look them over after they left the ring. Proakness, by Lexington, out of Bayleaf, by Yorkshire, the American, we described when placed first at Alexandra-park as a coach horse, and think that if stripped of his flesh he would make one of the worst of skeletons. The Gunner by Crater, out of Double Shot by Stockwell, is dropping to his leg and falling out, and with his capital ends and limbs should make a nice horse. Pedometer by King Tom, out of Miss Peddie by Poynton, has a deal of character, and is hunting-like, reminding us of Sir John Barleycorn on a small scale. Then Asteroid by Stockwell, out of Teetotum by Touchstone, though his ankles are queer, and he is in his twentieth year, has something about him that we believe in, and looks a good one. Syrian, by Mentmore, out of Princess by Autocrat, with a pedigree in the catalogue

taking him back to Moses, whose portrait we have, is a very useful-looking horse and found many admirers. Laughing Stock by Stockwell we have described over and over again, and so we have the neat handsome Suffolk by North Lincoln, out of Protection by Defence, and a nice horse, bearing a little shortness in his second thighs and a want of freedom in his hind-leg action. Interest by Lambton, his dam, by Arthur Wellesley out of Polly Melandras by Ratan; but what is the use of a pedigree to such an animal but to remind one of twin-laps. Kirby Kestham by the Streamer, out of Miss Whip by Brother to Bird on the Wing, would want a good pair of wings to make a flyer of him, as he has about the coarsest head, neck, and fore-hand we ever saw on a thoroughbred horse. The owners of these two horses should send them out propagating in foreign parts. Had any one talked to a leader of a stallion forty years ago about "propagators" he would have thought he was alluding to his gaiters. The thoroughbred stallions for getting hunters, which shall have served half-bred mares in the county of York during the season 1877 at a fee not exceeding five guineas, or which will serve half-bred mares in the county of York during the season of 1878 at a similar fee, the prize not to be paid under the latter condition till fulfilled, were a fair lot of eight, though Young Yaxley, a brown two-year-old hunting-like horse, by Domino, dam by Yaxley, which is no pedigree, did not look a thoroughbred. The winner, Duc de Beaufort, by Ventre St. Gris out of Dame D'Honneur, by the Baron, a Frenchman by birth, with the sire of Stockwell as his grand sire, is a very taking horse, showing a deal of blood, with length and good quarters, and limbs well placed, with knees and hocks near the ground; but he has rather round and almost beefy shoulders, with lightish back ribs—it always takes two horses to make anything like a perfect one. The Mallard by Knowsley, out of the Drake's Dam by Pyrrhus the First, is a muscular-built horse on short limbs, with hind legs well under him, but rather twisted fore-pasterns—still a very nice nag for the purpose, as well as a good mover. So we described him when he won this prize last year at Skipton. Then Ploughboy by Van Galen, out of Little Casino by Inheritor, is a lengthy, light-made horse, and a long, slovenly mover. Boundman by Boundholder, out of Maid of the Wood by Sir Tatton Sykes, is deep-ribbed and useful. Lifeguard by Lancer, dam by Magnum, is a horse of fair form. Cedric by Volturino dam by King Caradoc, is a short, fair-topped, corky horse, with stilly hind legs; and the other one was Young Yaxley, a three-year-old, by Domino, dam by Yaxley. This "too-short" "dam by," pedigree, reminds us of a nervous man with a slight impediment in his speech, who asked, when Amsterdam was shown—"Is-s-s-tha-at Am-sster-dam Am-sster-dam?" Nine hunting brood mares and foals made a very good class, but not up to that at Skipton last year—no more than was a neat little mare, Snowflake by Domino, dam by Domino, like unto the Snowflake by Magnum, dam by Professor Buck, which beat Lady Derwent and eleven other good ones there. The mare Achievement by Knowsley, dam by Laughing Stock, is a big, roomy, plain mare, with a deep hunting fore hand, but rather plain in her quarters and smallish second thighs. The third mare, Lady Deceater by Coddington, is very neat and hunting-like, and with Lady Derwent and the real Snowflake, which, be it understood, was not here—have been showing themselves for some years, and so has Go-ahead by Stephenson, which we said a good word for at Thirsk ten or eleven years ago when unnoticed in a class of, we think, over thirty; but she beat the winner afterwards at Beverley or Malton in the days when judges were not supplied with catalogues, for, marvellous as it may appear,

one of the same judges at Thirsk was in office, and when we told him he had put the Thirsk winner out altogether and put the discarded Go-ahead first, he said he was not aware that he had seen them before, though a good judge too. The corky Lady Lynne, the first Royal, was here with Mr. Batty's Lady Caroline, Mr. Kirk's Lady Swale, and Mr. Robinson's Gipsy, all hunting like, more or less. Joker, out of Jester's dam, headed a fair class of hunting yearlings, geldings, and fillies, and a nice hunting-like chestnut he is, though a little high on the leg at present, with a very good one from Mytton Hall by Knight of the Garter, dam by King of Trumps. Mr. Emerson's Doctor by East Coast, dam by King Caradoc, had also hunting character with bone, and Mr. H. W. Cholmeley's Landlady by The Baron, dam Lady Angela by Angelu, had form, but was high on the leg. There were ten in the class, out of an entry of sixteen. The two-year-old hunting geldings were very fairly represented by fourteen, and the judges were a long time before they fixed on the winners. Crispin by The Baron or Ploughboy, out of Clara by Hubert, a good-looking one bred by the executors of the late Sir George Cholmeley, who was as famous for his chestnuts as Suffolk is, which beat a very handsome blood-like chestnut in Hambleton by Landmark out of Sister to Tiger by Coddington. Mr. Kirk had a deep-ribbed brown, with good limbs by Highborne, dam by Hadji, and Mr. Lovel a nice-topped horse, but with anything but wearing-looking legs, by George Osbaldestone. Nelly, a fine filly of breed by East Coast, was queen of a small but good class of two-year-old fillies. Mr. Dubou's Chatterbox, Mr. Gowlands' Miss Stewart, and Mr. Thompson's Evie being some of the best. The three-year-old hunting geldings, with an entry of fourteen, had some very good ones, including Boynton, the Royal winner at Birmingham and Liverpool, which was bred in Yorkshire, and knows how to use his hind-legs; the second, Barrister, is a fine one by King Bruin, and, like his sire, a disher, who we remember when at the Royal at Battersea. Mr. Lancasters' brown by Baron Cavendish, a good-looking horse with limbs, was not noticed, though first last year at Skipton. Mr. Crompton's Nobleman, Mr. Scott's Speculation, Mr. Harrison's Hulam, and Mr. Millers' Carbine, and some others were in the class. Mr. Lett was first in a useful class of three-year-old fillies with Baroness, a lengthy short-legged filly, with good limbs, the second to him being Emblem, with breed but queer forelegs, and the third the short-legged Miss Watson. Mr. Jacob Smith was first with Statesman by Baron Cavendish, a very sporting-looking horse, nice and handy, and a goer, beating Sir George, who till now has won everything of any note—it was a very near thing. When the Prince of Wales was on Knaveamire, in 1866, Mr. Smith won with The Sallow, very nice hunter, which the Prince bought Mr. Woodcock's Ganton was a neat horse and a pretty goer, and Mr. Wilburn's Canute, Mr. Ellis's Tomboy, and some others were worthy of notice. There were four nice four-year-old mares, the one not in the prize-list being Bellosa, which like Countess and Triumph is not unknown in the ring or the columns of this paper. There were eleven five or six-year-old hunting geldings or mares up to fifteen stone with pounds, which was won by Sir George, a chestnut by Theobald, dam by Newmarket, a nice hunting-like horse, and a goer, which we noticed at Lillingdon, when one of the first of the dismissed, Baldersby being second; while Perfection, a level-topped but deep-chested chestnut and a goer, of Mr. Birton's, seemed to be much fancied by the Master of the Oakley. Mr. Kirby's Toby, Mr. Brown's Grey Friar, Mr. Brown's Hercules, and Mr. Whitelands Generous, a nice stamp but slow, were some of the best-looking. Glengyle, with his grand stride, was again to

the fore in a good class of eighteen, with The Sheriff, another galloper, and a second to him at Skipton, now nowhere, as the second was Rosamond, a neat dark-chenut mare and a fair goer, while the hunting-like Meior came in for third honours. Mr. Ringrose's Sarah is a sweet little mare, rather slack in her back, but a pretty galloper, and as quick as lightning. Captain Preston had two, Emmeline and a bay by Wyndham, and Mr. Musgrave, Danby, all worthy of notice.

"The object of the Council of the Society in offering prizes for families of Shorthorns is to induce breeders to show their animals in a natural breeding state, and not made-up for exhibition, and the judges are instructed 'to disqualify any family wherein an animal has been forced into an unnatural condition.' Bravo! This is a step in the right direction, and why should not these excellent instructions apply to bulls and cows shown for breeding purposes, as it is well-known that this over-feeding and pampering is often the ruin of the pick of the land, and through it we hear that Jupiter is falling-off, unfitted, Io is getting patchy in her rump—and that Augeas will not exhibit his stock. In the Roman triumphs, the public executioner walked behind the conqueror, and most certainly the butcher ought to follow up many a prize beast shown for breeding purposes at an agricultural show.

These instructions show that the Yorkshire Agricultural Society's object is not to turn the kingdom into a nursery for mere fancy, pampered breeds, and to discuss trifles light as air, worthy only of toy-terriers and bantam fanciers, but to encourage the breed of well-formed animals, with sound bodies in sound hides, and that will at the least cost grow into good beef, mutton, and bacon, and so pay the producer and help to feed a daily-increasing population, and rear men stout of heart and limb, who in an hour of need may be able to assist us in holding our own. The Shorthorns, though in numbers a few short of last year, made a strong and good show; for the sweet head, graceful neck, and full bosom, with the nicely proportioned deep frame and circular ribs—as if the animal had taken to the discarded erinoline—the long quarter, well-covered hip, deep twist, rounded arm, massive thigh, and tapering leg, were to be seen wherever the roving eye rested for the moment. Mr. T. H. Miller's grand and happy-looking family were not wanting in any of the points we have been dilating on. They were Ringlet II., Ringlet IV., Ringlet V., Ringlet VI., Ringlet VII., and Benedictine, a red and white bull, who should have been christened The Baron—

"The adventurous Baron the bright looks admired."

In fact, they were the same family, with an increase of one, Ringlet VII., which were at the Royal, and here had simply to walk round the ring and show themselves for £50; for Mr. Ashburner's family, the only other entry, were not in the yard—so the Society had to put away till next year the other £35 they had so liberally offered in prizes. The bulls, of any age above three, certified to be the sire of live calves, and also to have served three cows or heifers since the 1st of January, 1877, were six well-known in the ring—Sir Arthur Ingram, the first Royal; Telemachus VI., the second Royal; and Baron Brunnow, a neat bull which took third place, beating the third Royal, Sergeant Irwin, for beating him, which the Sergeant has done. The others were General Fusée, the fourth Royal, in bulls not exceeding three years old, which he did at York by six days; and the Duke of Chambergh, a fourth Royal. In the Shorthorn bulls above two and not exceeding three years old, Lavangro, the light, elegant, and lengthy third Royal was first, beating Snowstorm the Grand, and the first Royal, and Rear Admiral, the second Royal. Lavangro, after this exploit, is going to Germany; so there will be no chance of their fighting it out again with him.

The others were the highly commended at the Royal, Sir Hugh Irwin; the commended, Count Towneley, Clovia, and the useful Fox from Sledmere, which was not at Liverpool. There were seven bulls above one year old and not above two years old, the Flag of France, a very compact bull with a good head, and a third Royal, being first, and Kalmazzo, a second Royal, close up, and very showy he is, with his tail a little too high, while the third was Prince of Georgia, with a steery horn, and a patchy rump. Mr. Linton's Fitz-Arthur, a fine, taking white bull, and which has beat the lot, has fallen away, and looks flat in his rib and quarter, and high in the leg. The others were General Flirt, a highly-commended at the Royal, and Prince Oneida and Baron Aston, of Sir F. Custable's. The Shorthorn bull calves above five and not exceeding twelve months, were five, Vice-Admiral, the first Royal, and a prize-taker at the Highland Society, being the elect—and a long, level, broad-chested bull he is—the second being Baron Rigelale, a second Royal, who looks like going in the loin, while the third was the neat Lord Benedict. The handsome General Favourite was here, Mr. Jefferson's flat-ribbed Gazette and Lady Pigott's steery-horned Nobilia.

The Shorthorn cows above three years old were good, the first being the well-known Royal Lady Alicia, with her fine fore-quarters, and a neat, thick-set frame, with hooped ribs, beating Zvezda, which walked, or rather waddled, along with her back arched as if she was dragging on a miserable existence; and it was whispered she was going—"Where?" said we, innocently—she is another victim of over-stuffing, that cannot stand high life, and is going all to pieces, while a sweet cow of great character is Queen Ithaca, though out of it. Royal Rose was third, while the great coarse Blooming Bride looks like a butcher's bride, and a full blown one too, and as patchy as she can be, showing high living in every wrinkle, while Fairy in her twelfth year, who seems to have led a sober life, is now but a wreck, still the dam of General Flirt, General Favorite, and General Fusée. The highly commended Alma is very level and even, but with no great character, but Mr. Atkinson's Moonshine is a sweet cow. Mr. Hutchinson is again to the fore with the good-looking, deep, broad-framed Grateful, a second Royal winner, and now beating Imperious Queen, who is said to be going off-gluttony again! If people only knew when they had enough how happy we might all be—at least not hungry. The others were Mr. Fawcett's Bramhope Darling, the Stand Stud Company's Lady Beautiful and T. Bland's Brazilian Bride. In the Shorthorn heifers not exceeding two years old, we could not see why the raw-looking steery Victoria Lucida came to be placed before The Lady of Worley Hall, a very massive animal, with a nice head, and the winner of the first Champion Cup at Bath for any breed, a second Royal and a first at Doncaster, as over-pampering has not been abolished, or before the "Second Lady Carew." Mr. Ward's Sweetheart would lose her lover in such company, and Mr. Linton's Carnation is a flower that would not attract. There were eight heifer calves, and most of them neat and pretty. There were three cows for dairy purposes, with such glorious bags, ready to burst, poor brutes! We inspected them while the judges were gone to luncheon and before they were judged, when the milk was actually streaming from the teats of the second prize, and on telling one of the judges we should notice it he said "I really hope you will, for it is cruelty to animals, and I thought she might have died with milk fever." There were only two Alderney's through the death of Mr. Brown, of Rossington, Doncaster, a great exhibitor of them.

The Leicesters we have said were good, and Mr. Hutchinson was a long way ahead of any, with his

Royal shearing ram, which was pronounced by all to be a wonderful sheep, so true throughout. Mr. Borton being a poor second, though he had five entries for his sheep, wanted a leg of mutton; while Mr. Turner was nowhere with his three. Messrs. Coverdale, Leake, and Jordan were the other exhibitors. In a good even lot of aged rams Mr. Borton was first with an excellent sheep, and Mr. Creswell with a good one, who had a hard fight with one of Mr. Coverdale's for second honours. There were representatives from the flocks of Messrs. Marria, Turner, Leake, and Brown. Five nice pens of gimmers bring us to the end of the Leicesters. The Lincolns were also well represented with the pick of the following well-known flocks, Messrs. Howard, Johnson, Cartwright, Byron, Wright, Dudding, Pears, and Smith. In sixteen entries, the first and second Royal shearing rams were placed as at Liverpool. There were but four aged rams, the first and second being very good, and not much to find fault with the other two, while five fair pens of shearing gimmers bring us to the twenty pens of sheep, of any Down breed, in three classes, which bothered the judges cruelly, so much so, that they advised that there should be no more of it. Still this sort of thing takes place when there is a champion cup for the best animal in the yard. The best shearing ram was an Oxford, and the second and third Shropshires all useful sheep. Mr. Pilgrim won the first and second prizes, with two short woolled aged rams in a class of five entries, and His Royal Highness the Prince of Wales, the first shearing gimmers, with some very nice Southdowns from the Sandringham flock, and as round as balls of wool. Mr. Baker being the second, and Mr. H. Miller the reserve, with some matching Shrops.

The pigs as we have explained before, were a failure, and with the exception of a few nice Berkshires, one or two of the white and a few nice black, were an ordinary collection.

The show was a success and well attended, and is to be held next year at Northallerton.

PRIZE LIST.

JUDGES.—CATTLE: G. Drewry, Holker, Carke-in-Cartmel, Lancashire; W. Parker, Penrith; L. C. Crisp, Alnwick.
SHEEP.—C. Stephenson, Woburn; G. Walmsley, Bridlington; T. U. Dixon, Brandesburton, Beverley.
PIGS.—J. Wilson, Morpeth; W. Goodrick, Corbridge-on-Tyne.
HORSES.—Thoroughbreds, hunters, and roadsters: R. Arkwright, Wellingboro'; J. M. Richardson, Ulceby; W. T. Scarth, Darlington. Coaching and Agricultural: T. Gibbons, Carlisle; E. Godfrey, Brigg; J. Outhwaite, Catterick.

HORSE SHORING.—T. Bowman, York; R. Durnford, Tadcaster.

CATTLE.

SHORTHORNS.

Families of Shorthorns, to consist of cow of any age, and two or more of her descendants.—First prize, £50, T. H. Miller, Poulton-le-Fylde, Lancashire (Ringlet 2nd and five descendants).

Bulls, of any age above three years old.—First prize, £20, W. Linton, Sheriff Hutton, York (Sir Arthur Ingram); second, £10, Marquis of Exeter, Burghley Park (Telemachus 6th); third, £5, B. Fletcher, Carlton, Yealod, Leeds (Baron Brunswick).

Bull, above two and not exceeding three years old.—First prize, £20, F. J. S. Foljambe, M.P., Workop (Lavangro); second, £10, the Duke of Northumberland, Alnwick Castle (Snowstorm); third, £5, T. Willis, Carperby, Bedale (Rear Admiral).

Bull, above one and not exceeding two years old.—First prize, £25, F. J. S. Foljambe, M.P. (Flag of France); second, £10, W. Tennant, Selby (Kalamazoo); third, £5, B. St. J. Ackers, Painswick, Gloucestershire (Prince of Georgia).

Bull calves, above five and not exceeding twelve months old.—First prize, £15, T. Willis (Vice-Admiral); second,

£10, Earl of Feversham, Helmsley, Yorkshire (Baron Ryedale); third, £5, T. Strickland, Thirsk Junction (Lord Benedict).

Cows, of any age above three years old, in calf or having produced a fully matured calf since August 1, 1876.—First prize, £30, T. H. Hutchinson, Catterick (Lady Alicia); second, £10, Emily, Lady Pigot, Weybridge, Surrey (Zvezda); third, £5, R. Bruce, Northallerton (Royal Rose).

Heifers, not exceeding three years old in calf or milk.—First prize, £20, T. H. Hutchinson (Grateful); second, £10, Emily, Lady Pigot (Imperious Queen); third, £5, Emily, Lady Pigot (Rosalba).

Heifers, not exceeding two years old.—First prize, £20, Emily, Lady Pigot (Victoria Lucida); second, £10, Earl of Ellesmere, Manchester (The Lady); third, £5, B. St. John Ackers, Painswick (Second Lady Carew).

Heifer calves, above five and not exceeding twelve months old.—First prize, £15, J. Snarry, Sledmere, York (Eastern Princess); second, £10, B. St. John Ackers (Third Lady Carew); third, £5, T. H. Miller, Poulton-le-Fylde (Flower of France).

DAIRY CATTLE.

Cows for dairy purposes.—First prize, £7, J. Scott, Pontefract (Carnation); second, £3, S. Frank, Brandby, Knaves-wold.

Alderney, Jersey, or Guernsey cows or heifers in calf or milk.—First prize, £7, Mr. Pearson, Pontefract; second, £3, Lord Wharfedale, Sheffield (Lady Susan).

SHEEP.

LEICESTERS.

Shearing rams.—First prize, £20, T. H. Hutchinson, Catterick; second, £10, J. Borton, Manor House, Malton; third, £5, W. Kendall, Ness.

Aged rams.—First prize, £10, J. Borton; second, £5, R. W. Creswell, Ravenstone.

Five shearing gimmers.—First prize, £15, F. Jordan's Executors, Eastburn, Driffield; second, £7, W. Brown, Holme-on-Spalding Moor; third, £3, T. H. Hornby, Ganton, York.

LINCOLNS.

Shearing rams.—First prize, £15, and second, £7, A. Garfit, Sotherton, Lincoln; third, £3, E. J. Howard, Nocton, Lincoln.

Aged rams.—First prize, £10, E. J. Howard; second, £5, H. Smith, Bingham, Notts.

Five shearing gimmers.—First prize, £10, J. Pears, Mere, Lincoln; second, £5, T. Cartwright, Lincoln.

ANY DOWN BREED.

Short-woolled shearing rams.—First prize, £15, G. Street, Maulden; second, £7, Earl of Zetland, Richmond, Yorkshire; third, £3, T. H. Miller.

Short-woolled aged rams.—First prize, £10, and second, £5, T. C. Pilgrim, Hincley, Leicestershire.

Five short-woolled shearing gimmers.—First prize, £10, H. R. H. the Prince of Wales, K.G., Sandringham; second, £5, T. C. Pilgrim.

PIGS.

SIX TO TWENTY FOUR MONTHS OLD.

Boars of the large breed.—Prize, £5, G. Sedgewick, York (Lincoln).

Sows of large breed, in pig or milk.—No entries.

Boar of small breed.—No entries.

Sow of small breed in pig or milk.—First prize, £5, and second, £3, G. Sedgewick (Queen).

Boars of black or Berkshire breed.—First prize, £3, J. Marshall, Shipton, York; second, £2, J. Mollett, York (Kid-broke).

Sows of black or Berkshire breed in pig or milk.—First prize, £5, and second, £3, B. St. John Ackers, Painswick (Snowflake II. and Snowdrop II.).

Boars of any breed, not qualified to compete in Classes 21, 23, and 25.—Prize, £5, W. Holmes, York (Brutus).

Sows, of any breed, in pig or milk, not qualified to compete in Classes 22, 24, and 26.—First prize, £5, L. Barstow, Hazelbush, York (Sally); second £2, G. Sedgewick, York (Lucy).

Three breeding sows of any breed, under twelve months old.—First prize, £5, J. Mollett, York (Rose, Moss Rose, and Dewdrop); second, £2, J. J. Hunt, York.

HORSES.

THOROUGHBREDS.

Stallions, four years old and upwards, suitable for propa-

gating the breed of sound and stout horses for racing or stud purposes.—First prize, £100, T. Gee, Wadhurst, Sussex (Citadel); second, £50, Earl of Zetland, Richmond (King Lud); third, £25, Duke of Hamilton, Easton Park, Wickham Market (Preston).

Stallions, thoroughbred for getting hunters, which shall have served half-bred mares in the county of York during the season of 1877, at a fee not exceeding five guineas, or which will serve half-bred mares in the county of York during the season of 1878, at a similar fee. The prize not to be paid under the latter condition till fully filled.—First prize, £10, H. & C. Clara Vyner, Ripon (Duc de Beaufort); second, £5, M. Biddulph, M.P., Ledbury (The Mallard); third, £10, J. Gilby, Beverley (Ploughboy).

Coaching stallions.—First prize, £15, W. Kirby, Stamford Bridge, York (Lord Penzance); second, £5, F. Leake, North Cave, Brough (The Count).

Roadster stallions.—First prize, £15, The Stand Stud Company, Whitefield, Manchester (Star of the East); second, £5, G. Wilberforce, Pocklington (Sir Alfred).

Agricultural stallions, three years old and upwards.—First prize, £30, J. F. Crowther, Miffield (Topsman); second, £15, The Stand Stud Company (Young Champion); third, £5, W. Simpkin, Hull (Clydesdale Champion).

Entire agricultural colts, foaled in 1875.—First prize, £15, R. Twodir, Catterick (Souter Johnny); second, £5, Earl of Ellesmere, Worsley Hall (Samson Second).

Hunting brood mares and foals.—First prize, £30, C. H. Hart, Dunnington Lodge, York (Achievement); second, £20, E. Horaby, Ganton, York (Lady Derwent); third, £10, H. Watson, Newbiggin, Eley (Lady Deonater).

Coaching brood mares and foals.—First prize, £20, J. and T. Reader, Holme (Bonny); second, £10, G. Robinson, Hauxwell, Bedale; third, £5, J. Train, Anlaby Common, Hull (Lady Jane).

Roadster brood mares and foals.—First prize, £20, J. Kirby, Stamford Bridge (Mid of all Work); second, £10, The Stand Stud Company, Whitefield (Miss Polly); third, £5, W. Norfolk, Appleton, Catterick (Jenny).

Agricultural brood mares and foals.—First prize, £30, T. H. Miller, Poulton-le-Fylde, Lancashire (Princess of Wales); second, £20, Earl of Ellesmere, Manchester (Mrs. Muir); third, £10, Earl of Ellesmere (Honest Lady).

Two years old agricultural geldings or fillies.—First prize, £15, The Stand Stud Company (Bunny); second, £5, T. H. Miller (Fawns).

Three years old agricultural geldings or fillies.—First prize, £15, Earl of Ellesmere (Lady Worsley); second, £5, W. P. Miller, Merlewood, Lancashire (Honest).

COACH HORSES.

Two years old coaching geldings.—First prize, £10, J. Kirby (Belthorp); second, £5, J. Potter, Kirbymoorside (Leading Article).

Two years old coaching fillies.—First prize, £7, T. Irving, Bowness on Solway (Belle); second, £5, J. Thompson, Selby (Bee).

Three years old coaching geldings.—First prize, £15, J. Kirby (Prince Imperial); second, £1, H. Watson; third, £5, J. Kirby (Yorkshireman).

Three years old coaching fillies.—First prize, £10, T. Irving, Bowness-on-Solway (Kate); second, £5, W. Wray, Long Marston, York (Kitty).

ROADSTERS, HACKNEYS, AND PONIES.

Hackneys or roadsters, geldings or mares, from four to six years old, equal to carry fifteen stones.—First prize, £20, J. Robinson, Hesse Road, Hull (Brownbell); second, £10, W. H. Blackman, Howden (Lady Wilton).

Hackneys or roadsters, geldings or mares, from four to six years old, equal to carry twelve stones.—First prize, £15, J. Robinson, Charles; second, £5, T. Bowman, Sledmere (Victory).

Ponies, geldings, or mares, not less than 12½ hands, and not exceeding 14½ hands high.—First prize, £10, J. H. Smith, Shipton, Market Weighton (Queen of the Fairies); second, £5, Duke of Hamilton, Easton Park, Wickham Market (B.xo).

Ponies of any age or sex, not exceeding 12½ hands high suitable for children, to be ridden in the ring by boys under fifteen years old.—First prize, £10, A. H. T. Newcomen, Aldear (Jct); second, £5, Miss Newton, Norton, Malton (Lilly).

HUNTERS.

Yearling hunting geldings or fillies.—First prize, £10, Duke of Hamilton, Easton Park, Wickham Market (Joker); second, £5, Major Stapylton, Helperby.

Two years old hunting geldings.—First prize, £15, H. W. Cholmley, Rillington (Crispin); second, £5, B. Horaby (Hambleton).

Two years old hunting fillies.—First prize, £15, M. Ray, Tiers-bidge, Darlington (Nelly); second, £5, A. J. Cholmley, Rillington (Coromandel).

Three years old hunting geldings.—First prize, £20, Duke of Hamilton; second, £10, J. D. Crompton, Thornholme (Barriker); third, £5, J. Dickson, Haslebusch, York (Stockton).

Three years old hunting fillies.—First prize, £20, J. Lett, Scampston, York (Baroness); second, £10, T. Carter, Driffield (Emblem); third, £5, W. H. Key, Falford, York (Miss Watson).

Four years old hunting geldings.—First prize, £20, J. Smith, Humberton, Helperby (Statesman); second, £10, P. P. Newton, Norton, Malton (Sir George); third, £5, A. J. Brown, North Kimsall Hall (The Lamb).

Four-year-old hunting mares.—First prize, J. Akenhead, Fluston (Countess); second, £10, J. Musgrave (Triumph); third, J. Darrell, York (Vasconitess).

Five or six years old hunters, geldings, or mares, up to 15 stones with hounds.—First prize, £20, G. Holmes, Beverley (Sir Grouse); second, £10, J. B. Booth, Killiby, Catterick (Baldernby); third, £5, W. Whitehead, Wellingborough (Generous).

Five or six years old hunters, geldings, or mares, up to 13 stones with hounds.—First prize, £20, T. H. Hitchison, Catterick, Yorkshire (Glengyle); second, £10, W. Wright, Nottingham (Rosemond); third, £5, P. Matthews, York (Major).

SUMMARY OF ENTRIES OF LIVE STOCK.

Cattle	86
Sheep	131
Pigs	33
Horses	352
Total.....	602

NORTHUMBERLAND.

The annual Show of the Northumberland Agricultural Society was opened on August 8th, on the Town Moor, at Newcastle. The liberal premiums offered this year—amounting to £1,200, including twenty silver cups given by various bodies and individuals—brought together most of the prize-winners at recent large Shows, both in the Shorthorn and horse departments.

Of the nine entries in the aged bull class of Shorthorns only five appeared. Sir Arthur Ingram was at once put aside for the first place, and the contest lay between Duke of Chambergh, Duke of Howl, and Cloves for second and third honours. From the first the judges seemed to look favourably upon the Duke of Howl, and it ultimately obtained the second prize, Cloves coming third, while Mr. Mitchell's bull was highly commended. There were only two absentees from the two-year-old bull class, and the seven which appeared were a beautiful lot. Soostern and Albany, the Duke of Northumberland's pair, were greatly admired, and the former—first at the Royal this year—was at once selected for the first place. After some deliberation, Albury, which was first as a yearling at Birmingham and third at Edinburgh, received the third prize, and Bear-Admiral was placed in the same position relatively to Snowstorm as he occupied at Liverpool. The yearlings were a large class, and, most of them being nearly equal in merit, were rather a difficult class to judge. Kulamazyo, the second winner at the Royal, was placed first, and the son of Arthur Ingram (Fitzarthur) took second honours. Rosecrans, a son of the celebrated Duke of Aosta, and the largest bull of the class, came in third. Yearlings were a promising lot. The first prize

was taken by Mr. Willis's Vice-Admiral, which occupied the same position at Liverpool. The cows were a decidedly superior collection. The judges were occupied a long time in making their awards. They soon selected the Catterick cow, Lady Alicia (the second winner at Liverpool), for the first place, Mr. Mitchell's Alma being second, and the Shaw Farm cow Carolina 5th, third. Three two-year-old heifers appeared, and the judges reversed the Royal decision by placing the Catterick heifer, Grateful, after Gaiety 3rd. Ten out of thirteen represented the yearling class, the prize winners being 2nd Lady Carew, from Painswick, and Diadem 2nd. The heifer calves were a nice lot, and the first prize was awarded to 3rd Lady Carew. As soon as the first prize bulls were led into the ring, the judges awarded the cup offered by the Newcastle Corporation for the best bull to Sir Arthur Ingram. The silver cup given for the best Shorthorn cow or heifer was given to Gaiety 3rd.

The horses, of which there was a splendid show, were well represented in all classes. Not a few of the prizes went to Yorkshire and Scotland. Most of the prizes in the sheep department went to Yorkshire and the borders. Nearly all the prizes for pigs were taken by the Earl of Ellesmere.

PRIZE LIST.

CATTLE.

SHORTHORNS.

Bulls, above three and under seven years old.—First prize, £30, and cup, value £25, W. Linton, Sheriff Hutton, York (Sir Arthur Ingram); second, £10, J. Vickers, Crook (Duke of How); third, £5, B. St. John Ackers, Painswick (Clow).

Bulls, above two and under three years old.—First prize, £15, Duke of Northumberland (Snowfarm); second, £8, T. Willis, Bedale (Vice-Admiral); third, £3, Duke of Northumberland (Albury).

Bulls, above one and under two years old.—First prize, £15, Mr. Tennant, Barlow, Salby (Kalamazoo); second, £8, W. Linton (Fitz-Arthur); third, £3, A. H. Browne, Chat-bid (Bosaurus).

Heifer calves, under twelve months old.—First prize, £3, T. Willis (Vice-Admiral); second, £2, Sir J. Saintbarnes, Bart., Newcastle-upon-Tyne (Wild Prince of Oxford 2nd).

Cows.—First prize, £15, T. H. Hutchinson, Catterick (Lady Alicia); second, £8, W. A. Mitchell, Aberdeen (Alma); third, £3, Her Majesty the Queen (Carolina 5th).

Heifers above two and under three years old.—First prize, £10, and silver cup, value £25, J. Angus, Stockfield-on-Tyne (Gaiety 3rd); second, £5, T. H. Hutchinson (Grateful).

Heifers above one and under two years old.—Prize, £7, B. St. John Ackers (2nd Lady Carew).

Heifer calves, under twelve months old.—First prize, £3, B. St. John Ackers (3rd Lady Carew); second, £3, Sir W. C. Trevelyan, Bart. (4th Oxford Welfare).

GALLOWAY CATTLE.

Bulls, above two years old.—First prize, £10, and a silver cup, value £30, T. Teasdale, Bogg, Alston (Robin Hood); second, £5, J. Cunningham, Dalbeattie (The Mackintosh).

Bulls, under two years.—Prize, £10, J. Cunningham (Lauriston).

Cows or heifers, above three years old.—First prize, £8, J. Cunningham (Bride of Brampton); second, £4, J. Cunningham (Maid Marian).

Cows or heifers under three years old.—First prize, £8, and second, £4, J. Cunningham (Lady Stanley 3rd).

CHANNEL ISLES.

Cows or heifers of any age.—First prize, £8, Sir M. W. Ridley, Bart., Cramlington; second, £3, T. Wilson, Northumberland; third, £1, Sir J. Marjoribanks, Bart., Coldstream (Lilly).

AYRESHIRE.

Cows or heifers of any age.—First prize, £8, Sir M. W. Ridley, Bart.; second, £3, J. Bruce, Barmoor Castle, Beal.

SHEEP.

BORDER LEICESTERS.

Rams, of any age.—First prize, £10, H. Tweedie, Catterick

(Fitz James); second, £5, W. Linn, Acklington; third, £3, J. and S. Clark, Cockburnspath.

Shearling rams.—First prize, £15 and a silver cup, value £10, second, £8, and third, £3, J. and T. Clark.

Pens of five ewes.—First prize, £10, and second, £5, R. Tweedie.

Pens of five gimmers.—First prize, £10, J. and T. Clark; second, £5, J. Melvin, Edinburgh; third, £3, A. Smith, Haddington.

CHEVIOTS.

Rams, of any age, above two-shear.—First prize, £8, and a silver cup, value £10, for the best ram, and second, £4, T. Elliot, Jedburgh.

Two-shear rams.—First prize, £8, and second, £4, T. Elliot, Jedburgh.

Shearling rams.—First prize, £8, J. Robeson, Otterburn (Musterpier); second, £4, T. Elliot.

Pens of five ewes.—First prize, £4, T. Elliot; second, £2, J. Robeson, Otterburn.

Pens of five gimmers.—First prize, £4, and second, £2, T. Elliot.

BLACK FACED MOUNTAIN.

Rams, above two shear.—First prize, £6, J. McCracken, Kirkwhelpington; second, £4, T. Elliot.

Rams, two shear.—First prize, £4, T. Elliot; second, £2, J. McCracken, Kirkwhelpington.

Pens of five ewes or gimmers.—First prize, £4, T. Elliot; second, £2, C. Armstrong, Alston.

HORSES.

AGRICULTURAL.

Clydesdale or other agricultural stallions, of any age.—First prize, £50, J. F. Crowther, York (Topman); second, £20, A. Gemmell, Renfrewshire (Gleniffer).

Brood mares, not Clydesdale, with foal at foot.—First prize, £10, T. H. Miller, Boulton-le-Fylde (Princess of Wales); second, £8, Earl of Ellesmere, Manchester (Honest Princess); third, £3, H. Palleine, Selby (Pattie).

Brood mares, not Clydesdale, in foal at the time of show.—First prize, £10, and a silver cup, value £30, for the best agricultural brood mare, L. Drew, Hamilton (Sheba); second, £8, Earl of Ellesmere; third, £3, and a silver cup, value £15, for the best agricultural brood mare, the property of an exhibitor, residing in the county of Northumberland only, W. T. Howden, Otterburn (Janet).

Clydesdale brood mares, with foal at foot, or in foal at the time of show.—First prize, £30, J. Johnson, Lanarkshire (Darling); second, £10, J. Thompson, Kelso (Kelso Maggie).

Agricultural geldings or fillies, three years old.—First prize, £10, J. Cunningham, Dalbeattie; second, £4, W. Howden, Chester-le-Street (Blossom).

Agricultural geldings or fillies, two years old.—First prize, £8, Earl of Ellesmere; second, £4, J. Waddell, Edinburgh (Milleta).

Agricultural colts, geldings, or fillies, one year old.—First prize, £8, Earl of Ellesmere; second, £4, T. Laws, Whickham.

Pair of geldings or mares, of any age, for agricultural purposes.—First prize, silver cup, value £10, J. Waddell (Darling and Sally); second, £5, J. Waddell (Prince and Charley).

Pair of geldings or mares, of any age, suitable for dray or colliery purposes.—First prize, silver cup, value £10, J. Waddell (Willie and Grace); second, £5, L. Drew, Hamilton.

HORSES FOR THE FIELD.

Brood mares with foal at foot or in foal at the time of show.—First prize, £10, and silver cup, value £25, H. F. Trenholm, Sedfield (Countess); second, £5, E. Hornby, Ganton (Lady Derwent); third, £3, J. W. Hodgson, Carlisle (Borealis).

Three-year-old geldings.—First prize, £5, and silver cup, value £10, for the best colt, gelding, or filly, Duke of Hamilton, Wickham Market, Suffolk (Boynton); second, £3, H. Dand, Jan., Acklington (Heartfoot).

Three-year-old fillies.—First prize, £5, R. Emerson, Darlington (Topsy's Farewell); second, £3, J. Rickerby, Crosby-on-Eden (Young Kate).

Two-year-old geldings.—First prize, £5, J. Thompson, Baillie Knowe, Kelso.

Two-year-old fillies.—First prize, £5, J. Percival, Carlisle; second, £3, F. J. Snowball, Dudley (Heatherbell).

Yearling colts or geldings.—First prize, £5, C. Emmerson, Darlington (Doctor); second, £3, Duke of Hamilton (Joker). Yearling fillies.—First prize, £5, G. W. Elliott, M.P., Fence Houses; second, J. Davison, jun., Trillington, Morpeth (Braw Lass).

Hunters of any age confined to the district comprising the counties of Northumberland and Durham, and regularly hunted therein during the last season by the present owner.—First prize, a silver cup, value 25 gu., and one-half of a sweepstake of 10s. each, J. Cookson, Morpeth (The Old Boy); second, £5, and one-half of the sweepstake, Mrs. Baker, Durham.

Hunters five years old, and not exceeding seven years old, qualified to carry at least 12 stones with hounds.—First prize, a silver cup, value £25, J. B. Booth, Catterick (Baldersby); second, £5, J. B. Cookson, Morpeth (Irish Lass).

Hunters, five years old and not exceeding seven years old, qualified to carry at least 12 stones with hounds.—First prize, a silver cup, value £25, T. H. Hutchison, Catterick (Glengyle); second, £5, J. Shaw, Dundee (Leotard).

Geldings or mares, four years old.—First prize, a silver cup, value £25, given by Mrs. A. H. Browne, F. P. Newton, Malton (Sir George); second, £5, T. Forster, jun., Beal (King John).

HACKNEYS.

Geldings or mares of any age, not exceeding 15 hands high, and qualified to carry 15 stones.—First prize, a silver cup, value £20, J. Robinson, Hull (Charles II); second, £5, Major Briggs, Hylton Castle, Sunderland (John Peel).

Geldings or mares of any age, not exceeding 14.3 hands high and qualified to carry 12 stones.—First prize, a silver cup, value £20, Duke of Hamilton (Bosco); second, £5, J. H. Smith, Market Weighton (Queen of the Fairies).

PONIES.

Geldings or mares of any age, not exceeding 13.2 hands high.—First prize, a silver cup, value 10 gu., T. Gray, Gateshead (Sam); second, £4, Sir H. Clavering, Bart., Blaydon (Zoe); third, £2, E. Stout, Newcastle (Spider).

Geldings or mares of any age, not exceeding 12 hands high.—First prize, a silver cup, value £10, T. Wallis, Stocksfield (Donald); second £3, J. Nelson, Wimalow (Toby); third, £2, J. Mulcaster, Carlisle (Moppel).

PIGS.

Boars of the large white breed, of any age.—First prize, £5, R. E. Duckering, Northorpe, Kirtton Lindsey; second, £3, Earl of Ellesmere.

Boars of the small white breed, of any age.—First prize, £5, and second, £2, Earl of Ellesmere.

Boars of the Berkshire breed, of any age.—First prize, £5, Lord Arthur Cecil, Innerleithen; second, £2, C. Roope, F.M.C., Whitley.

Sows of the large white breed of any age.—First prize, £5, and second, £2, Earl of Ellesmere.

Sows of the small white breed, of any age.—First prize, £5, R. E. Duckering; second, £2, Earl of Ellesmere.

Sows of the Berkshire breed, of any age.—First prize, £5, and second, £2, B. St. John Ackers, Painswick.

Sow of breed not eligible for preceding classes, of any age.—First prize, £5, and second, £2, Earl of Ellesmere.

Pen of three sow pigs of the large breed, of any colour, under 16 weeks old.—First prize, £2, Earl of Ellesmere.

Pen of three sow pigs of the small breed, of any colour, under 16 weeks old.—First prize, £2, Earl of Ellesmere.

Pen of three, black sow pigs, of any colour, under 16 weeks old.—First prize, £2, Lord Arthur Cecil.—*Leeds Mercury.*

BRADFORD, TONG, AND DUDLEY HILL.

The sixteenth annual Show of this Society was held on July 28th, in the large field attached to the Greenfield Hotel, at Cutler Heights. The weather was rather unfavourable, rain falling once or twice during the afternoon, and this tended somewhat to reduce the number of visitors as compared with the attendance in previous years. The Show was one of great excellence. The number of entries in all classes was nearly double that of last year. Prizes of the value of £300 and 17 silver cups were distributed. As usual, the Show combined collections of horses, pigs, poultry, pigeons, rabbits, ducks, dogs, &c. An exhibition of agricultural and horticultural produce was also added to the attractions of the

day. The show of horses was numerous, and in some classes—especially in cobs, hunters, and draught horses—the animals were of very superior quality. Every variety of poultry was well represented. Mr. Beldon, of Griststock, and Mr. B. Rawnsley, of Bingley, were conspicuous as successful competitors in this department; the show of pigeons was also good. Dogs of almost every breed appeared in keen competition. Steeplechases and pony-races created a large amount of excitement, especially the former, as the course lay over a number of hurdles, and a water jump.—*Leeds Mercury.*

BRAWITH, KNAYTON, AND DISTRICT.

On August 5th the sixteenth annual exhibition of this Society was held in a field conveniently situated at the eastern side of the village. There was by far the largest number of entries that had been known at this Show. Although the attendance of the public was not so large as in previous years, owing to the threatening weather during the early part of the day, and most of the farmers in the district being in the midst of their hay harvest, yet the Show may rank as one of the most successful ever held at Knayton. There was an excellent show of sheep, no less than 143 being entered for competition. Fat lambs were also a very good show. Pigs were not a great show, but the quality of the swine was good. In the agricultural horse classes there was one of the best exhibitions that has been known at Knayton. Hunters were very good, and both coaching horses and roadsters were a fair show, and good in quality. During the day the Tairk Brass Band, under the leadership of Mr. John Green, was in attendance.—*Leeds Mercury.*

DORCHESTER.

The annual exhibition of horses, cattle, sheep, and pigs in connection with this Society was held at Dorchester on August 1. The number of entries in the different classes was much smaller than on some previous occasions. There was a fair show of horses and pigs, but in the cattle department the falling-off was very striking.

EAST DERBYSHIRE.

The 25th annual exhibition of the Norton Farmers' Club and East Derbyshire Agricultural Society concluded on August 9, the two days' show at Chesterfield being successful in bringing together a large quantity of live stock, dogs, and poultry, and in attracting a large number of visitors. The horses were a good show. A stout little pair, full of activity, although aged, took the first prize in the class of harness horses. They belonged to Mr. J. B. Barrow, Ringwood Hall, Chesterfield. The Duke of Rutland's prize for the larger animals went to a fine five-year-old bay, shown by Mr. S. Burkitt, of Chesterfield, who took the second prize with a brown gelding not quite so well built. In the nag classes Mr. H. W. Grimes, Scarscliffe Grange, showed a very promising foal, by "Tom Bowline," which took the special prize, the dam getting first honours as the best brood mare with foal at foot. John Siddall, a Chesterfield lad, living at Stainsby, Hardwick, was adjudged the spurs offered for the best rider under 16 years of age. "Beauchief," the property of Mr. Nix, of Outcote, Alfreton, took the first prize for stallions. Mr. Nix also took the second prize. In the bulls Mr. F. N. Smith was first, and Mr. Jenkinson second in the two-year-olds. In those from one to two years Mr. Burkitt took first and Mr. T. H. Oakes second prize. Mr. Smith's bull received the prize for the best bull in the yard. Mr. Oakes was first, and Mr. T. Hopkinson second in the cow class, and Mr. S. Burkitt took both prizes for heifers. Mr. Hopkinson and Mr. Oakes also carried off prizes for younger animals. In the long-wooled sheep Mr. R. Johnson was first and second in the ram class, and first for shearing rams. Mr. W. Roe took several prizes for ewes.—*Derby Reporter.*

TYNESIDE.

The fortieth annual Show of the Tyneside Agricultural Society was held on August 1st, at Hexham. From a financial point of view the promoters could not have been better favoured, while a more lovely or more commanding acro-

age for the holding of a meeting of this character than that afforded by the three fields placed at the disposal of the Society by Mr. Wm. Cooke, auctioneer, Hexham, could scarcely have been obtained. The entries were larger than in previous years in every class, and in point of quality were everything that could be desired. A show of dogs was a new feature introduced, and secured an entry of no fewer than 116 animals, including some well-known prize-winners. The Swarthbros were an exceptionally fine lot, pretty evenly balanced in point of merit, and were a credit to a local show. There was a very good show of cows, in calf and in milk; two-year-old heifers, yearling heifers, and heifer calves. The sale of the Tyne has long held a foremost place in the breeding of Leicester sheep, and yesterday's Show fully maintained that reputation, the judges experiencing considerable difficulty in making their awards, so close were the merits of each class under inspection. There was an excellent show of yearlings. The ewes were also a capital and even lot, a remark which also applies to the gimmers. The top lambs were few in number, but very good in quality. The horses in all classes were capitally represented, and some very fine animals faced the judges. Messrs. Spraggon and Nafferton were the most successful exhibitors amongst the horses, obtaining the silver cup and first prize for the best mare for breeding draught horses, also first prize for the best two-year-old gelding or filly, and first for the best pair of draught mares or geldings. Hackneys were not so largely represented as hackneys, the silver cup in the former class being obtained by Mr. A. J. Blackett, of Whitfield Hall, with a four-year-old brown gelding by Langar, while Mr. W. C. Patterson, High Thorneyburn, Falsgrave, carried off the palm for hackneys with his bay five-year-old Maggie. The attendance was large, the stand during the parade and leaping being well patronised. In the afternoon a luncheon was partaken of in a marquee on the ground. Mr. Wallace, Old Ridley, presided.—*Newcastle Courier.*

INDIAN TEA.—The rapidly-increasing consumption of Indian tea in this country is a matter for national congratulation, seeing that India is a portion of the British Empire, and that the prosperity of a part bears a certain proportion to the prosperity of the whole. If India can supply us with as good tea as that now obtained from China, and at as low a relative price, there is every reason for encouraging the trade. The imports of tea in 1875 amounted in value to £13,746,961, by far the greater part of which, large sum of money went to China. Authorities in India say that that country is capable, when the culture of tea has been fully developed, of supplying us with all we consume, and if that is correct, it is obvious that the encouragement of this branch of Indian production is highly desirable. As the proof of the "paddy bag is in the eating," however, the increased consumption of Indian tea in this country will depend chiefly upon its flavour and price. Old Indian residents, returned to this country, are said greatly to prefer Indian to China tea, and it has been a subject of regret to them that they have had so much difficulty in getting former article genuine, a great deal of inferior tea from China having been palmed off on the public as Indian tea. The Indian Tea Agency, of 2, Jernyn-street, London, has been started to supply the need thus felt, and if they act up to their announced intention of supplying a genuine article at a moderate price, they have no reason to fear a lack of public support. The poverty of India is a distressing problem to our latemen, and anything tending to enrich her must be looked on hopefully by all who take an interest in public affairs. The rapid increase in her tea trade during the last sixteen years is one of the most hopeful signs of future prosperity.

IRISH AGRICULTURAL STATISTICS FOR 1877.—The official agricultural statistics for Ireland were published on Aug. 10. The correspondent of the *Daily News* telegraphs the following summary:—There is an increase of land under crops of all kinds to the extent of 58,684 acres. The increase under wheat is 23,619 acres; under barley, 5,109 acres; under oats, 5,839 acres; vetches and rape, 4,511 acres; and under meadow and clover, 64,040 acres. The crops in which there is a decrease are oats, 15,468 acres; potatoes, 9,194 acres; turnips, 8,436 acres; other green crops, 1,738 acres; and flax, 9,570 acres. As regards live stock, there is an increase of 18,578 horses and mules, 1,577 asses, 42,957 pigs; and a decrease in cattle of 121,413, in sheep of 19,070, and in alry 68,975.

WASTED SEWAGE.

Mr. Mechi writing to *Public Health*, says:—

I plead guilty and apologise. I ought not to have reproached sanitary science with sending our rounds of beef and quartered loaves down the sewers after we have done with them, in order that they should convert the pure waters of our rivers into unsavoury soup. The fact is that our Government is the guilty party, or perhaps the more timid Metropolitan Board of Works. The latter let to a company the whole of the North London sewage for fifty years, to pass 40 miles through and fertilise much of Essex, and to culminate on 20,000 acres of reclaimed land (the Maplin Sands). The plans were drawn and approved, the Act of Parliament obtained, the Board of Directors formed, and £35,000 deposited with the Board of Works as a guarantee that the work should be completed within nine years. Well, seven or more years have elapsed: the work, although commenced, was never carried out, the Thames has been poisoned for seven years, and the land has been deprived of its fertilising agents; but the Board of Works still "grip" the £25,000 and refuse to part with it. What have been the cause of all this delay, disappointment, and waste of money and of manure? I reply, "The want of a single word 'guarantee.'" As with our East Indian Railways, shareholders had no faith, and would not subscribe their money unless the Government, or Board of Works, or both would guarantee a moderate dividend on the two or three millions required; and as this guarantee was not forthcoming, the concern collapsed. The Thames has been poisoned, its bed shallowed, and the land has been deprived of an immense supply of food-producing material, while the people lost one great source of home-grown food. After a long pause and period of hesitation and inaction, we have at last got a Rivers Pollution Act (the metropolis, I believe, still excepted), and most of our municipalities are floundering amid engineering differences and discrepancies, incurring enormous expenditure, without any common or authoritative uniformity of procedure. In the great case of Birmingham, it was positively and successfully obstructed by an individual opposition, consented to by the House of Commons—all this while thousands of acres of poor and uncultivated lands are languishing in poverty and non-productive for want of the very fluids which now contaminate our rivers. Take, for instance, Woking Common and many districts of now poor wastes, chalk downs, and sand. The sewage question is simply one of a pump to raise it, a pipe to carry it, and sand to receive it. The cost of raising 1,000 tons of sewage 300 feet high (which would give a fall of 5 feet per mile for 60 miles on the level) was proved before the Commons Committee by two hydraulic engineers to be only 13s. to 14s. Now, with a fall of 5 feet per mile (equal to an elevation of 200 feet) Glasgow receives from Loch Katrine, 40 miles distant, 22,000,000 gallons of water daily, and this through an iron pipe of only 4 feet in diameter. This cost a million of money. The same quantity of sewage might pass at the same cost, as shown by the evidence before referred to. In fact, there is no engineering difficulty in conveying the London sewage to the land. When once the Government or Metropolitan Board of Works shall have guaranteed a 4 or 5 per cent. dividend on a well-considered scheme, any number of required millions could be at once obtained, and every gallon of sewage would be applied to the production of human and animal food. It is no question of experiment, for the results are all well known. Indian railways would never have been made without a Government guarantee, and it is the want of a guarantee which alone prevents the utilisation of the London sewage. The Board of Works receives power to raise millions for our streets and public ways, but have never asked for them to convey the sewage to the land. As it takes the annual average produce of 20,000 acres of land to feed the people of London for a single day, it is easy to measure the national loss caused by the present system. The people of this country want to be taught from their early youth, like the Chinese, that no portion of the food-producing element should pass from them except to a receptacle for its preservation and utilisation. It is thus in China; and, consequently, some 300,000,000 or 400,000,000 of people are fed by home-grown produce, unaided by foreign imports of either food or manure. What a lesson for us!

FARMERS' CLUBS.

CARMARTHENSHIRE.

HARVESTING CORN IN WET WEATHER.

The quarterly meeting of this Club was held at Carmarthen on the 1st ult., when the discussion of the above subject, adjourned from the last meeting, was resumed. We regret that on account of the number of Shows reported in our present number we are unable to give the discussion in full. Mr. Brodie, in introducing the subject, declared his disbelief as to the possibility of applying Mr. Gibbs's system profitably and, after reviewing the different plans recommended by the speakers at the previous meeting, concluded as follows:—"Mr. C. S. Read, M.P. for Norfolk, who at one time, I believe, was in Wales, writing in *The Agricultural Journal* says, 'that huts or little stacks in the field, containing about 100 sheaves, are worth consideration.' I have used them many years ago in the East Coast of Scotland, but in that district they are only resorted to in desperation. An early friend of mine—who, by-the-by, competed for the Society of Arts' Prize, and was highly commended by the judges, being the third in merit, and who for some time farmed his own land in the South West of Scotland, where the rainfall is much the same as in South Wales, but the harvest considerably later—in writing me a few days ago, says, 'that small sheaves, erect stacks, and hand-hutting are the best security against dropping, and broken weather. The hutting in the field by trained hands of the West is alike cheap, efficient, and brief; it can be done for 1s. 6d. per acre. The operator finishes the top standing on the ground. They could not be dispensed with without serious damage to the crops in the majority of seasons.' But he is dead against leaving the corn lying on the ground for even one day. He recommends having it tied up as soon as it is cut, and stacked, then huted in four or five days. I also consider this the best and safest mode. Mr. Whigam, who was for six or eight years at Castle Muzum, Cardigan, whom, I dare say, many of you knew, and who is now land-steward to the Duke of Leinster, at Canteen Mynydd, says, 'That the usual custom in Ireland is, that the corn is put into mows, which I consider a plan that should be adopted by everyone.'"

WHITBY.

This old-established Society, of which the Marquis of Normandy is the patron, and the Hon. Octavius Duncombe president, held its annual exhibition on August 9, in fields adjoining the Union Mill. In respect to exhibits the number was fully up to the average, and this, too, in the more important classes. Whitby is now at the height of its season. The arrangements in the field were as nearly as possible perfect in every respect, a result due in large measure to the management of Mr. W. Stonehouse, who acts as the hon. secretary to the Society. The horses were the principal attraction in the Show, and a notable feature were the Cleveland bays. The entry was a good one, and there was a capital competition. This breed of useful horses is, unfortunately, becoming rare, notwithstanding the great efforts that are being made among some of the leading agriculturists and horse-breeders to keep up the reputation which it has deservedly earned. The Hon. O. Duncombe is among the foremost of these, and at the show he offered a magnificent cup as a prize. Of coaching brood mares, coaching foals, and coaching yearling colts or geldings there were numerous entries, and some useful animals were exhibited in all the classes set apart for those intended for purely agricultural purposes. Cattle formed a very attractive feature of the Show. A silver cup, value £3, given by Mr. G. Cussons, was won by a fine yearling heifer, the property of Mr. J. Wind. Mr. T. Strickland and Mr. G. Fyman won the 1st prize for a bull-calf and yearling bull respectively. Sheep were not numerous, but the quality was spoken of by the judges as excellent. The fine sheep peculiar to the wild moors of the locality were specially commented upon, and several notable sheep-breeders of the South who attended the Show were unanimous in their praise of their fine, healthy appearance. Mr. W. Rudsdale was the principal prize-taker in this class. There was a poor entry of pig, except in the

class for cottagers, the chief prize in which was one by Mr. J. Filburn. The special prize of a silver cup, value £3, for the best layer, was won by a grey gelding ("Wildfire") belonging to Mr. T. Bæfirth. The prize was keenly contested, and was the source of much pleasurable excitement. The whip for the best rider was given to F. Wrightson, and the spurs, for the second best, to W. Saling, who rode a horse belonging to Mr. Coverdale. The second prize, value £3, was accorded to a fine black mare, belonging to Mr. J. Wellburn. The luncheon was held in a marquee, and was provided by Mr. Thomas Crabb, of the Little Angel Inn. Mr. C. Bagnall, J.P., Seaton Castle, occupied the chair. Occupying a prominent position on the grounds were some agricultural implements. There was nothing particularly new, though a few improvements in some of the remote pieces of mechanism in one or two engines were pointed out. Mr. J. Weighill took the chief prize, and Messrs. Jackson Bros. the second.—Abridged from the *Leeds Mercury*.

BADMINTON FARMERS' CLUB.—The nineteenth annual exhibition held under the auspices of this Club took place on August 8, in the Huntsman's Close, Badminton; and notwithstanding that the weather was very unfavourable there was a large attendance. The committee of management, and the secretary and treasurer (Mr. R. W. Lloyd), have every reason to congratulate themselves upon the success which attended the show of live stock, for though in some classes there was a smaller number of competitors than usual, this deficiency was more than compensated for by the increased entries in other departments. The following are the number of entries:—Horses, 105; extra stock, 15; cattle, 45; sheep, 28; extra stock, 1; pigs, 4; roots, 8. His Grace the Duke of Beaufort was, as usual, a large exhibitor of extra stock, and the animals shown by him and by the Marquis of Worcester were of very fine quality. The hunters were exceptionally good. There were eleven entries in the class for yearling colts or fillies, and a better lot of youngsters seldom came before the judges; but, good as they were, they were surpassed by the two-year-olds, which numbered fourteen, the whole of this class being commended by the judges. The three and four-year-olds were highly deserving of commendation; and there was a keen competition amongst the three-year-old roadsters, the lot including some very useful animals. The ponies were really capital. There was a falling-off in the entries of horses for agricultural purposes compared with previous years, and the quality was hardly up to the average. The brood mares and foals, however, formed a capital class, and of the five entries only one failed to win the favour of the judges. Turning to the cattle department, we may mention that the number of bulls stabled was rather limited, but there was an excellent collection of cows and heifers, and the competition in several of the classes was very keen. The Shorthorn cows were particularly deserving of praise, and the heifers were very good. A fair number of sheep were present, and the quality of the long-wools, which were well represented, was excellent. The pigs were few in number, and there was not a great amount of competition for the prizes for roots, but the specimens shown were very good considering the earliness of the season.—*Gloucestershire Chronicle*.

THE CROPS IN SCOTLAND.—If the crops could be reaped at the present moment they would be of a very fair average, both as regards quantity and quality. Everything therefore depends upon the weather during the next few weeks. In most districts the oats are particularly good, whilst the wheat crops are very heavy in the ear. General anxiety prevails amongst farmers in reference to the hay crop, which is very large. Owing to the unsuitable weather, a considerable portion of the hay—probably one-fifth—will be more or less damaged. The root crops are on the whole excellent. Few symptoms of potato disease have yet appeared; and should the hay crop turn out to be deficient, this will be made up by an abundant supply of turnips. Beans and peas are very good, and blooming well.—*Glasgow Herald*.

CHAMBERS OF AGRICULTURE.

BEDALE.

On August 7 a special meeting of this Chamber was held at Bedale, when Captain Clark, of The Hermitage, President, occupied the chair.—Captain Clark read a paper on “The scale of deductions allowed from gross annual value on different kinds of rateable property when making out valuation lists for local purposes.” Captain Clark, in introducing his paper, stated that as the present Valuation Bill was about to be withdrawn, he thought the time opportune for discussing a matter which appeared to him of such vital importance. He proceeded to note the system followed in making out valuation lists, and stated that the gross value was taken as the basis of assessment, the Assessment Committee having the power to define what shall be the gross value of any hereditament. This power was confirmed in the draft of the late Valuation Bill, and he trusted such power would be retained in any Bill which might in the future be passed. Although up to the present time there has been no fixed rule or scale of deductions (taking generally), those deductions varying in different countries and even parts of countries, still there had been the varying rule that whereas the minimum of those deductions had fallen upon land, the maximum had fallen on lots of other classes of property. After reviewing the different classes of property and their deductions, he said his object that day was to state that in regard to land there were exhausted or weakened parts requiring renewal, of which no account was taken when making deductions, and which were of greater importance than gates, hedges, &c., already referred to, and were as much entitled to deductions as any of the worn-out parts of either manufactories or blast furnaces. He regarded land in the hands of the farmer as a part of the machinery whereby he raises his crops, and he had as great a claim for the “wear and tear” of his land as either the manufacturer or the ironmaster. He further argued that if it were not necessary to allow the ironmaster 33½ per cent. for general depreciation, it was equally equitable to grant deductions to the farmer for exhausted condition of the soil after each crop. Captain Clark then urged upon the members of the Chamber to take the matter into their serious consideration, and to ask themselves why it was that owners of manufactories and blast furnaces were allowed every third year (so to speak) to pay no rates? or why the private gentleman and mercantile men had 1½ per cent. deduction allowed for his residence, and the tenant-farmer, already doubly burdened, but 5 per cent. on his land? The Vice-president (Mr. J. Smith, of Highmoor), at the conclusion of the reading of the Chairman's paper, addressed the Chamber, during which he warmly supported the views expressed by the President, and was followed by Mr. Laidlaw, Mr. Gill, and others, who also supported the paper. Mr. J. Smith proposed “That the Chairman's paper be published in the form of a pamphlet, and circulated amongst the members of Parliament,” which was carried with acclamation. A vote of thanks, proposed by Mr. Toale, and seconded by Mr. J. Smith, to the Chairman closed the proceedings of the meeting.

GOOLE.

A meeting of this body was held on August 8th, at Goole, Mr. T. Bladworth presiding. The Chairman said that as the country was threatened with an invasion by the Colorado beetle, it behoved them, as a Chamber which consisted of farmers who were the largest growers of potatoes in the country, to petition the Privy Council to enforce severe restrictions on the importation of foreign potatoes, which was especially needed at Goole, at which port there was more danger of the Colorado beetle being landed than at any other in the country. He proposed that a petition be forwarded to the President of the Privy Council to that effect; and he would also add that much harm was to be feared from naturalists being allowed to have live Colorado beetles in their possession. The motion was seconded by Mr. James Robinson, and adopted. The meeting then adjourned.

MONMOUTHSHIRE.

On August 1st a general meeting of the members of this Chamber was held at Newport for the purpose of hearing a paper read by Mr. Fothergill, of Tredegar, on “Mountain Sheep Farming in Wales.” Mr. Richard Stratton, The Duffryn, presided.

In commencing his paper, Mr. Fothergill drew attention to the fact that in 1873 the council of the Royal Agricultural Society had set about ascertaining the causes of so many British farmers having given up the breeding of horses. The outcome of this had been to lead up to the inquiry, as far as possible, as to which of the various classes of stock was the most profitable to breed and maintain. The ideas which had been received were generally in favour of breeding sheep, as being the most profitable kind of stock to the British farmer. Under good management there was a quicker return from the flock, as well as flesh, of the sheep, which gave the flock an advantage over the herd. He had embraced within his paper the whole of the six counties comprising South Wales, and treated them as one district. Mr. Fothergill proceeded to treat the natural conditions of the soil on the mountainous districts, and the peculiarities of the herbage to be found in the localities, pointing out that on which sheep thrived, and that from which no benefit was derived. He likewise dealt with the carelessness and indifference of many owners of flocks in the matter of breeding, and the little attention they paid to the dressing and careful watching of their flock. To this inattention he attributed the extraordinary mortality in sheep on the mountains of Wales. Little, if any, discrimination was exercised by many flockmasters, who too often had to lament serious losses through circumstances which they might have controlled. Various diseases broke out amongst the flocks, and, until recently, little attention was paid to it. Mr. Fothergill detailed many of these diseases and their causes, as well as the remedy to be applied both for prevention and cure. He dealt also, in a thoroughly practical way with the means calculated to alter and improve the existing state of things, and pertinently asked what would the Scotch agriculturist say of the Welsh mode of sheep farming. Mr. Fothergill drew attention to another great evil from which the Welsh sheep-farmer had to contend. He designated the evil the dog nuisance, and commented upon the disastrous effects on a flock of sheep which had been worried by dogs. At a recent coursing match in the Rhondda Valley no less than 30 greyhounds present belonged to colliers, and one farmer had lost as many as 117 sheep from being worried by dogs. Another evil with which they had to contend was the gadfly, which deposited its eggs in the nostril of a sheep, from which a grub was produced. This insect found its way into the head sometimes at the base of the horn, and even got into the brain. It produced a disease known as the “sauff.” The evil was a terrible one, but could be prevented by the application of a solution of coal tar or diluted paraffine. Mr. Fothergill drew an interesting contrast between the Cheviot flocks, the Radnor, and the present breed of Welsh mountain sheep. At a recent sale 100 Cheviots had realised an average of £15 per head. A ram had been sold for the sum of £53, whilst a Welsh flockmaster would think £10 a most excessive sum. The matter of breeding and realising profits from sheep was not a mere matter of chance. He recommended the pure white-faced Welsh sheep as the best for all purposes in this district, and argued that profitable results would assuredly follow good management. He condemned the present system of overstocking the land as ruinous in practice. It was estimated that upwards of 240 million pounds of wool was imported into this country annually. With more care and attention much larger supplies of wool might be obtained in this country. Mr. Fothergill gave instances of the advantageous results of sheep breeding by the Radnorshire farmers, results which might be secured in the mountainous districts of Wales if the means were properly applied. It was resolved on the motion of the chairman, that the paper stand over for discussion to a fuller meeting of the Chamber.

NORFOLK.

HIGHWAY LEGISLATION.

A meeting of the Norfolk Chamber of Agriculture was held on August 4th, at the Norfolk Hotel, to take into consideration the subject of "Future Highway Legislation." The President (R. T. Gurdon, Esq.), occupied the chair.

The CHAIRMAN, in opening the discussion, said: When it was decided a few years ago that highways should be abolished, it occurred to everybody that the expenditure for the highways would fall so unequally and unfairly on certain parishes and individuals that it was universally agreed that further legislation was required. As it was a matter on which everyone seemed pretty well agreed, and not mixed up with party politics, one might be justified in the hope that their desires would be carried out. Last year a very weak Bill was brought into Parliament, which did not come up to their expectations; but if it had gone into committee it might have been altered and improved, and it would then have been better than nothing at all. But to their astonishment and dismay it never got into committee, and had been entirely dropped; while this session the matter had been quite ignored. In view of this, the Central Chamber, being annoyed at the course things had taken, desired to gather hints from other Chambers and to get some independent member to bring in the Bill next year. The Central Chamber requested all the Associated Chambers to call a meeting on the subject, and communicate the result. He knew it was easier to find fault with what others had done, or not done, than to suggest anything one's self, and he felt sure they were all agreed in regretting the fact that no action had taken place, though they might not be equally well agreed as to the direction which that action should take. Who were the people upon whom the expenditure of highways ought to fall? He replied that the expense ought to fall on those who used them, and those who benefited by them. Everybody benefited by them, for the result of their being good roads was a benefit to everybody in the country, because goods were brought cheaper from place to place, and could be sold at a lower rate than would be the case if the roads were bad. It was exceedingly hard that the whole expense of the highways should fall on real property. This was the case, however, and it was done even more unfairly in that the expense did not fall in a fair proportion on those who used them. In the old days of the turnpikes there was a sort of rough-and-ready way of meeting that, and the cost fell tolerably fairly on those who used them. The enormous expenditure on the turnpikes, and the establishment charges amounting to 35 or 40 per cent., were matters which caused great scandal, and these were considered so serious that turnpikes were doomed. He did not desire to bring turnpikes back, but he considered the present system was excessively unfair. He begged to move the following resolutions:—(1) That this Chamber regrets that the promised highway legislation has been again deferred. (2) That this Chamber is of opinion that an unfair proportion of highway expenditure falls on the owners and occupiers of land. (3) That the sum derived from taxes on locomotion should be handed over to the county boards, to be by them applied to the diminution of the expenditure for the roads. (4) That the said county boards shall declare which of the roads are main roads, and shall be empowered to charge such charge for their maintenance as they may think fit on the general county rate. The Chairman, alluding specially to the third resolution, said the proposal embodied in it would make a substantial sum, which would be applied in mitigation of their present heavy expenditure. The sum derived from the assessed taxes on carriages of every description would be added to by imposing a heavy assessment on the traction engines, which injured the roads so much. All this should be handed to the county boards, to be divided by the parish or highway districts, or by whatever authority it might be managed in the future. They were promised legislation on county boards next year, and they must hope the promise would be made good. In conclusion, he said he felt his resolutions were not strong enough, but they went in the right direction. He should like the expenses of the roads, or, at all events, of the old turnpikes, to be borne in some way by the whole community; and if this were done, they would experience some alleviation in their present expenses.

Mr. H. S. GRIMMER seconded the resolutions.

Mr. SPELMAN asked whether it was intended by the resolutions that where an engine passed through a district or parish

to the great injury of the road, to propose that the license to be paid by the engine should be handed over to the county board, and applied to the general expenditure of the county, or in aid of the expenditure in that particular district or parish?

The CHAIRMAN said he intended that the owner of an engine should apply to the county board to travel on a certain journey, or else to travel over the whole county. If the engine travelled a certain journey, then the amount paid as license would be handed over to the parish or parishes through which the journey was made; but if the application was for the whole of the county, then the sum paid as license would go to the county board.

Mr. SPELMAN cited the case of a parish which had a mill at one end and a station at the other; and he stated that the highway was so much injured by the traffic of traction engines that the road cost five times as much as previously, and was moreover a very bad road. This was a serious matter for a small parish; and in this case he thought the license money to be paid for the engine should be applied to the parish itself.

The CHAIRMAN said the money would be handed over to the county board, and the parish would apply for a certain amount from the board.

Mr. A. J. N. CHAMBERLIN said all the damage to the roads was not done by traction engines; for his firm's conviction was that just as much damage was done by the large brewers' drays of the towns and cities. At all events he could say, taking the year through, that where he met one traction engine he met 500 brewers' drays and other wagons of equal weight. What they wanted was a county board, with the direction of their own affairs, the gathering of their own money, and the paying of their own expenses.

Mr. R. SMITH said the highways were public property, and therefore the expenses of them ought not to be borne by the parishes in which they were, but by the county at large. This should have been done when the turnpikes were abolished; and he supported the resolutions.

Mr. C. S. READ, M.P., quite agreed with what had been said by Mr. Chamberlin with regard to the damage done to the roads by brewers' and other traders' vans; but he did not quite agree with him as to the method by which this was to be met. Almost all the brewers in Norfolk were situated in the city of Norwich, and of course would not be assessed to a county rate; and even if they were assessed to the county rate, and supposing they had a brewery and farm in the same parish, the brewery would pay perhaps £100 and the farm £400. Yet which was likely to do the most damage to the roads in the neighbourhood? Of course the brewery would. Unless they had some difference in the assessment he did not think they could meet the point put forward by Mr. Chamberlin. They had that mode of assessment in some parishes in Scotland, and it was carried out in this way. They put land by itself, and then certain manufactures, then quarries and minerals, charging the latter, he believed, something like four times the amount which was charged upon the naked land. It was possible that a power might be given to the county board to classify the assessment in this way. If, however, everybody were assessed alike, as was at present the case, certain industries which injured the roads very much would still escape, although they would "catch it" a little more than they did now. The old system of tolls was the best, though it was productive of some injustice and a great deal of inconvenience. A large portion of them were wasted in management, and there were many different turnpike trusts which might have been amalgamated into one. He remembered the riots in South Wales in consequence of the large number of tolls. No doubt they were very heavy, and as there was considerable wasteful expenditure in the management, at last the Government insisted on the whole of the roads in South Wales being put under the control of the different counties. As a result, the expense was at once diminished, and he believed the system worked well, giving general satisfaction, and the roads being kept in good repair. In some parts of England it would be impossible to go on maintaining the roads without toll; but he did not think that was the case in this part of the country. Take, for instance, two manufacturing towns between which there was an enormous traffic; they could not by any possibility meet the expense of the highway by a county rate. There was no system so just and fair, though inconvenient, as

tolls; and he believed they would be revived in some form or other in some parts of the country. It was very disappointing that there had been no legislation on this subject, but there had been other subjects, even more important, which had not received any attention in this Parliament. He feared that if the Highway Bill were brought in next year, it would not pass; and he believed neither a Highway Bill nor a Valuation Bill would be of any use until they had obtained county boards. As he had remarked in the House, they must not put the cart before the horse; but they must have the horses in the right place, and in the form of good county boards. He had recently noticed a great deterioration in the roads of the county, especially in those formerly turnpikes; and he observed it the other day in Bedfordshire, a county noted for its good roads. There he saw a wide road with only a narrow track on the top of it repaired, the two sides being entirely gone. They boasted of their great civilisation; but they were positively lapsing into barbarism in this matter, for they tarred their rivers into sewers, and their roads into sheets and rivers of mud. When this subject was before the Chamber in the winter, he had observed that in the city of Norwich the roads were a perfect disgrace to a great and opulent city; and some city magnates afterwards told him that he would drive him over all the roads in the city without giving him a jolt. All he could say was that on this very morning he had had considerable jolting in Norwich; but as at the time the Norwich gentleman spoke the place was ankle deep with slush, he might have taken him (Mr. Read) across the streets in a flat-bottomed boat without serious difficulty. He had seen that day that they had actually cased a Norwich road with gravel, here in the month of July; and what would be said if such a thing were done in the country, he really did not know. If they had good roads in the country, he thought those in the city ought to be made better; but of course a county board could not in any way interfere with the city. With regard to the extension of the highway districts, he did not think that would be any great improvement. They had bad roads in Norfolk; but he found in other places where they had highway districts, that the roads were, if possible, worse than theirs, and cost twice as much. And, again, deputations kept waiting on the President of the Local Government Board from these highway districts asking to come back to the old parish system, although that had certain disadvantages. Until they got a central authority in counties which could afford help with regard to the main roads, he did not think the extension of the Highway Act to all the kingdom would be of any material advantage. He had great pleasure in supporting the resolutions.

Mr. R. H. BLAKE-HUMPHREY said some people appeared to have the idea that all the roads in this country ran through country villages, whereas there were miles of streets running through towns for which the townsfolk had to pay. The brewers and others, who it was proposed to mulct, were paying a high rate towards keeping their streets and roads in order, by which they benefited their country neighbours. In regard to throwing the whole expense of the highways on the county rate in general, that seemed as broad as it was long, for if this were done they would only be doing exactly what was being done now. They were throwing the cost on each parish, and the only benefit which could be derived from that would be that some parishes which pay rather more in proportion to their mileage of roads than others would find the cost levied between them equally. The establishment of a county board would assist very much in equalising these charges, as it would have the power of applying money in a fair and equal manner.

The CHAIRMAN replied to certain points of the discussion, and the resolutions, on being put to the meeting, were carried unanimously, and the proceedings terminated.

NOTTS.

THE PROPOSED GLACIARIUM.

At the last meeting of this Chamber, Mr. ENFIELD, in doing a deputation on the proposed Glaciarium, said their object was not to ask for any monetary assistance, but entirely for the advice and co-operation of the Chamber on the subject—a subject which appeared to them to be one of considerable importance to many different classes of society. The success of a scheme of that kind must depend upon the wisdom of those who carried

it out, and therefore it seemed they ought to solicit the advice and assistance of those best able to judge on the different departments upon the subject. Perhaps one of the most important departments was the question of the meat trade, and therefore, looking at their body as being the most competent to give advice as to the best mode of carrying out the idea of a dead meat store, they had come to ask them to appoint, if they thought fit, a committee or sub-committee to confer and co-operate with the local committee that has been appointed as to what steps should be taken. The scheme proposed to be carried out in Nottingham was not yet in operation in any other locality except Southport, where the amusement part of the scheme received the greatest attention. In Nottingham the meat trade must be made the chief part of the project, and they wished to look about to find the best way of doing it in the interest of agriculturists who had interests at stake in connection with the importation of meat.

Professor GAMGEE then addressed the Chamber, and alluding to the present state of the question of meat supply, said it was of the highest moment that the Nottingham Chamber of Agriculture should speak with no unerring sound on the kind of agitation it was proposed to develop throughout the country as against the salutary measures that were proposed during the past week by the Cattle Plague Committee. An attempt had certainly been made to show that the interest of towns was against the country interest on this question, and they bore that in mind in coming before the Chamber of Agriculture that day to consult as to the best means of carrying out a very important social and domestic improvement in a method of distributing the food provided for their wants. It was probable that a calm discussion and careful inquiry into the subject would lead, not to the protection it was feared, but, on the contrary, to a full development of free trade in the interests of all. He could not refrain from drawing attention to the words that were spoken the other day at Bradford by the Right Hon. W. E. Forster. The right hon. gentleman said: "Having in the course of the day (24th) been present at a meeting of the Cattle Plague Committee, which, if I was not prepared to abnegate my functions, it was absolutely necessary for me to attend in order to protect the interest of the large towns as against the agricultural interest, I am sorry to say that I did not succeed; and I would now venture to advise the Bradford Chamber of Commerce to gravely look out in the future to the interests of the large towns as the Chambers of Agriculture appear to be looking after the interests of agriculture. I do not charge the farmers with an attempt to bring back protection; but I thought it my duty to protest yesterday against a disposition which amounted in my opinion to very much the same thing." Professor Gamgee went on to say that the interests of agriculture were the interests of the empire, and the statement of Mr. Forster required some further explanation, for the measures proposed were very wise and destined to exterminate disease. These were attempts to set class against class, and they found such an absurd statement in the *Manchester Guardian* that "farmers were seeking a monopoly of trade in superior descriptions of meat." For years farmers had had to contend with inferior beasts, and now they had to compete with the first cattle in the world—those of America. But farmers do not say, "Protect us from American meat," but they said, "Protect us against disease." The proposition of the *Manchester Guardian* was a monstrous one. Another paper, the *Manchester Critic*, had "the highest authority for saying that this was the most dangerous violation of the principle of free trade since 1816." Professor Gamgee said he had been told that Mr. Gladstone was very suspicious of the agitation going on in favour of the restrictions of the importation of live and fat cattle, and was very much frightened at the wholesome proposal he (the Professor) had made, and in which he stood alone—the abolition of live stock in ports relating specially to the slaughter of animals, and he, therefore, thought it of importance to know the opinion of the leaders of the Liberal party. He addressed the following to Mr. Gladstone:—"The time has unquestionably arrived when the voice of the country will sound in no doubtful manner in favour of rational measures for the permanent extinction of contagious cattle plague. The course of trade and the world's progress are determining the issue of a strife prolonged, in my case, over twenty-five years, during which I have had to lament the difficulty of convincing men in high places more than the slow growth of public opinion. The recent development of the American meat trade imposes on us a duty which should

not altogether be left to the slow process of time and fortuitous action. Our forefathers bred Shorthorns which formed the groundwork of the finest people-feeding herds the world has ever seen, and which are scattered over North America. These herds reach us simply by the use of nature's antiseptic—cold—in the form of currents of dry air blown incessantly round the suspended and clothed quarters of dressed beef in the ship's holds. The only drawback is that so soon as the meat is landed here it is subject to rough handling, imperfect storage, heat, and wet in the hands of carriers and others who run no personal risk in destroying that which people have been at such pains to preserve and send us. The natural, prudent, and satisfactory course is so to encourage this importation of dead meat as to drive back from our shores the ill-fed, ill bred, and off-inflamed cattle which have mainly interfered with our home meat production, and have actually raised instead of lowering the price of meat. It is a case for wise and general co-operation. We now know how to turn a live meat trade into a dead meat trade, and the reduction of the price of meat to 6d. per lb., which we may confidently anticipate from free trade in a dead meat, will do more for the comfort and prosperity of our working classes than perhaps any other simple trade measure to be suggested. In reply to his letter he received one from Mr. Gladstone, who said, "I have received and am obliged by your letter and enclosures. I view with much interest all efforts tending to substitute a dead for a live meat trade at home and from abroad, otherwise than by legislative coercion and prohibition. But it is entirely beyond my power to take a personal share in these efforts." Professor Gamgee went on to remark that he need scarcely say those engaged in Nottingham were not in a conspiracy to do what it had been said they were doing, and he continued to point out the great advantage to be derived by the agricultural interest in bringing dead meat instead of live animals to this country. They proposed that Russian cattle, the cattle of *Breus-vania*, the cattle coming from those rinderpest districts where disease followed human conflict, should not come alive to their shores, and that whenever there was a suspicion of disease in a European country, those countries should be scheduled, and thus do away with the chance of diseased animals being brought unknowingly in their midst. It was proposed to slaughter cattle at the point of embarkation. The Professor forcibly pointed out the risk and dangers of the present system, and mentioned the recommendation of the Committee of the House of Commons. He did not hesitate to say that this was the best report ever presented by a Committee of the kind, although it did not aim at that simple measure which would lead to the immediate cessation of those harassing restrictions on trade incidental to the system of inspection and dealing with fat animals at ports of embarkation. There was only one way of dealing with the home and foreign meat trade which Mr. Gladstone told them was desirable to be carried out, and that was the bringing into large towns the best and cheapest means of storage which would prevent putrefaction in provisions—the use of cold. They wished to acquire such a regulation as met the wants of the consumer on the one hand and the producer—the farmer—on the other. This was no experiment, but the initiation of a great system. There was no stauncher supporter of free trade than himself, but free trade in meat was impossible unless there should be a system the reverse of disease, putrefaction, and decay, such as had taken millions from the pockets of the British people in the last few years. The proposal met with cordial support from members of the Chamber, and ultimately a committee of three gentlemen was formed to confer with the committee formed in the town to further the scheme.

TRIAL OF MOWERS.—On July 31 a highly interesting and important trial of grass mowers, haymakers, and horse rakes took place in connexion with the annual show of the Coquetdale Agricultural Society. Mr. Banlett led off the ball with a two-horse implement of easy draught, which cuts smoothly and swathes well. Messrs. Brigham began work at the same time, but their mower, though it cut fairly did not swath well, and was rivalled by that of Mr. Simm. Mr. Kearsley's did very good work; so did Messrs. Pickaley's, while Mr. Arkle's was scarcely equal to the task. Messrs. Samuelson's mower was shown to be an exceedingly good implement, and for a time opinion seemed to be divided between it and Messrs. Harrison and McGregor's, which cut very low and exceedingly clean. Mr. Carr's mower did much better towards the close,

when it worked in a highly creditable manner, the swathing being much better than it was at the commencement. On the other hand Messrs. Kemp and Nicholson's went better at the outset. But the implement which attracted most notice for a considerable time was Mr. Walter A. Wood's, which has carried off we know not how many prizes, and appeared likely to take first place here. It was uncommonly well driven, as, indeed, all the mowers were, more especially that belonging to Messrs. Harrison and McGregor. After a first trial a selection was made, and Messrs. Bamlitt, Simm, Kearsley, Pickaley, Samuelson, Harrison and McGregor, and Walter Wood were invited to compete again. This trial, which greatly simplified the work of the judges, took place in an adjoining field forming part of Mr. Mather's farm. They first cut on the flit and afterwards over the rigs, when the superiority of the machines was shown in the following order:—Messrs. Harrison, McGregor, and Co., first prize; Mr. J. Syman, second. These were, of course, all two horse mowers with bars of 4ft. 6in., but there was also a trial of one horse implements, although the crop was much too heavy for machines of the kind. The competitors were Mr. Bamlitt, Mr. Wood, Messrs. Harrison and McGregor, Mr. Kearsley, and Messrs. Pickaley and Sims, every one of whose mowers were admirably adapted for hill farms where a great breadth of cut is not deemed essential, but for level ground their limited stroke was thought to be much too short. The following were the awards in the one horse mower class:—Messrs. Harrison, McGregor, and Co., first prize; Mr. Walter A. Wood, second. The successful competitors in rakes were Messrs. Houghton and Thompson, Carlisle. — *Newcastle Journal*.

TIPTREE HALL.—If Mr. Mechi did not choose his farm for its natural fertility, he certainly did not fix upon Tiptree as a country residence on account of the beauty of its scenery. Tiptree Hall is four-and-a-half miles from Kivedon Station; and although Kivedon itself is rather pretty, when Tiptree Heath is reached, the country is flat, the trees are scrubby, and there is nothing but the growing crops to please the eye. The Hall is a plain square building, well suited to the character of the unattractive country around it. In the spacious dining-room there is a plain, and in the drawing-room a more ornamental specimen of the improved fire-grate so strongly recommended by Mr. Mechi last year in some letters to *The Times*. Any blacksmith can convert an ordinary register-stove into one of these improved grates which have fire-clay backs and whole bottoms level with the floor. For heating and economising fuel they are excellent. For the convenience of his London friends Mr. Mechi shows one at his place in Regent street, where instructions how to make the grate, or where to procure them ready made, may be obtained. One great advantage of these grates is that fires in them require no stoking; and the distressing problem to a visitor, whether he has known his host long enough to be entitled to the privilege of poking the fire, is abrogated by their use. — *World*.

THE CROPS IN CANADA.—From all sides the news reaches us every day that the fall wheat, of which a much greater breadth than usual was sown this season, is not only far above the average in the amount of the yield, but is the finest sample of grain we have been favoured with for a long time. This will enable the farmer to command the highest price for all he has to sell, as well as send to market much more than the usual quantity. In some few localities there are drawbacks to record in the form of local droughts, blighting frosts, or destructive tornadoes; but, take the harvest for all in all, the room for complaint is astonishingly small. In many places there will be twice the average yield, and from fifty to sixty bushels to the acre will be no uncommon returns in many parts of Western Ontario. The present week will see the fall wheat nearly all harvested, and should the weather remain as it has been the condition in which it has been secured will be far better than usual. There is reason to believe that spring wheat will be not much more than an average crop, if it reaches that point, though at its present rate of progress it is possible that it may turn out much better than is now expected. The other spring grains are, however, excellent crops. Oats are in many places better than they have been for years, and so are peas and barley, though neither of these is of so much importance as wheat. — *Toronto Daily Globe*, July 26th.

THE HARVEST PROSPECTS IN PRUSSIA.

In order to obtain reliable early statistics of this year's harvest the central agricultural Societies of Prussia had been requested by the Ministry of Agriculture to furnish reports of this year's harvest prospects by July 25. The harvest to be expected was to be expressed in figures representing the percentage of an average crop, the latter being equal to 100. According to *The Cologne Gazette*—to which we are indebted for these statements and the table below—the reports had been furnished to the central Societies by the branch Associations already between the 15th and 20th July; consequently the figures for the summer crops are only estimates, which

were liable to many changes according to the state of the weather. But it may in general be stated that the estimates given for the summer crops are somewhat too low, the effects of the drought of June having been remedied by recent rains. The harvest of the winter crops, on the contrary, at least as regards quality, may probably be affected injuriously by damp weather. With regard to bulb and root crops, the final results will not be known until the issue of the harvest tables in October. The averages of the whole Monarchy, and the figures for the different provinces, as far as they may be calculated from the reports to hand, are at present as follows:

CROPS.		The whole Monarchy.	Prussia and Monarchy.	Government district of Königsberg.	Government district of Danzig.	Brandenburg.	Further Pomerania.	New Pomerania.	Posen.	Silesia.	Saxony.	Hanover.	Westphalia.	Government district of Cassel.	Government district of Wiesbaden.	Southern Rhenish.	Rhine Province.	Hohenzoller
WHEAT	Corn.	94 101	83	96	94	89	98	101	96	95	85	94	98	97	95	101	94	
	Straw	94 100	—	94	—	—	—	97	95	91	80	—	—	—	—	101	—	
RYE	Corn.	98 91	86	89	101	93	98	100	96	97	93	103	105	112	89	111	107	
	Straw	97 99	—	84	—	—	—	103	96	98	89	—	—	—	—	—	—	
BARLEY	Corn	83 86	88	88	81	69	80	80	73	83	83	89	89	85	93	91	81	
	Straw	80 84	—	84	—	—	—	75	71	81	79	—	—	—	—	91	—	
OATS	Corn.	83 89	87	81	77	69	79	86	81	79	83	83	92	84	93	88	77	
	Straw	81 88	—	77	—	—	—	83	77	78	80	—	—	—	—	88	—	
PEAS	Corn.	88 96	95	90	87	83	91	80	84	86	92	91	86	90	100	93	78	
	Straw	89 86	—	90	—	—	—	84	86	88	91	—	—	—	—	93	—	
BEANS	Corn	87 83	—	91	—	—	—	—	—	81	86	—	86	—	94	—	—	
	Straw	83 83	—	90	—	—	—	—	—	75	85	—	—	—	—	—	—	
BUCKWHEAT..	Corn.	89 95	80	88	74	93	84	90	—	65	95	100	—	100	104	92	—	
	Straw	87 95	—	84	—	—	—	92	—	65	94	—	—	—	—	93	—	
RAPE	Corn	74 64	25	61	81	87	81	73	81	70	61	80	80	87	86	89	79	
	Straw	71 64	—	65	—	—	—	77	80	67	59	—	—	—	—	89	—	
POTATOES		96 95	93	97	96	99	97	101	94	91	100	93	95	93	103	96	93	
BESTRUTS		93	—	—	—	—	—	—	—	89	97	—	—	—	—	—	—	
MANGOLD		91 96	87	91	—	94	85	104	93	88	93	93	90	86	100	98	83	
HAY		110	71	88	103	—	85	—	101	106	100	—	106	—	102	115	128	
CLOVER		83	73	80	88	—	73	—	93	88	73	84	—	—	90	96	—	
LOPINES		80 91	78	79	72	83	83	89	73	85	82	—	76	—	87	69	—	
FLAX		81	74	90	—	—	—	—	72	79	80	—	—	—	97	—	78	
HOPS		78	99	—	—	—	—	63	—	88	50	—	—	—	—	—	92	
VETCHES		87	90	—	—	—	—	—	—	—	—	—	—	—	—	—	85	

MR. PROUT'S ANNUAL SALE.

The growing crops on Blount's farm were disposed of on August 9th, and very satisfactory prices were made. This was due to the fact that the crops were quite an average of the country, which is a great thing to say when we consider that Mr. Prout's system is an experiment to grow cereals almost continually. We have described this system on several occasions, therefore we need not go over its details fully to-day. But we may say that the main points of it are, thoroughly underdraining the clay, cultivation in the autumn by steam power, and feeding the crops with suitable artificial manures at the rate of 50s. per acre per annum. Considering that we had a great excess of wet in the winter and spring, no such a thing as clean harrow teeth having been seen when in use down to the end of May, we may characterize the crops on Blount's farm this year as a marvellous result of applied science and skill. The first lots sold were 69 acres of barley in sizes of 10 acres each. These made an average of £3 5s. per acre. The next lots were 20 acres of Rivet's wheat of 10 acres each. These were in Dudley Field, and this is the 10th crop of wheat on this field in succession. Some professional judges, land valuers and auctioneers, estimated the yield at quite 6 qrs. per acre, which we fully endorse. The two lots were sold at the good price, considering all the work of harvesting and getting the produce to market has to be done by the purchaser—of £14 2s. 6d. per acre. The home field of 3½ acres of oats had suffered from the wet at sowing time and were

not strong, but they made an average of £7 and upwards per acre. In Broad Field 8 acres to 9 acres of oats made £9 to £9 2s. 6d. respectively. In Brook Field 16 acres made £8 5s. and £8 7s. 6d., in two lots of 8 acres each. Park Spring Field was partly Rivet's wheat and partly barley; the former made £14 per acre and the latter £9 10s. The oats in Home Field made £10 5s. and £9 10s. per acre; ditto, six acres in Home Meadows, £10 17s. 6d.; ditto in Crossfield, 16 acres—8 acres, £10 12s. 6d., and the other 8 acres £10 per acre. In Home Field two lots of six acres each of barley made respectively £9 15s. and £9 7s. 6d. per acre.

We were not able to obtain the sum total and averages of the sale before our train was due at S. W. Bridgworth, but we shall be able to give these, in comparison with previous sales, on an early occasion.

Upwards of 200 of Mr. Prout's neighbours and friends sat down to a capital luncheon at one o'clock, after which the usual loyal toasts were proposed and responded to with becoming loyalty. These were followed by some spirited and practical speeches by the Chairman (George Howden, Esq.), Mr. Prout, the Rev. Adam Twynley, D.D., of Canada; Mr. Squire, Stanford-le-Hope, a steam plough patron of 20 years' standing, and others, but their remarks we are obliged to defer.

Of manures, we may add, Mr. Prout continues to use about 30 tons per annum of Messrs. Orlendoff's dissolved guano. This is applied on account of the large percentage of ammonia and sulphates it contains, and being judiciously mixed with bone manure, all the extraneous constituents required by the plants are thus supplied.

AGRICULTURE OF THE ITALIAN PROVINCE OF FERRARA.

The report made by Consul Celnaghi states that the principal products of the province, which is almost exclusively agricultural, are wheat, hemp, maize, wine, rice, beans, hay, straw, firewood, cocoons, garden produce, fish, game, reeds, rushes, &c. The wheat grown is soft. The hard quality has been tried several times, but, although successful at first, it soon degenerated. Spring wheat is only cultivated occasionally to replace the autumn grain, should the latter either have been prevented being sown, or have become spoilt from excess of wet, or other causes. In some localities spring wheat, planted between January and February, is more productive than the autumnal sowings. There seems no doubt but that the agriculture of the province has greatly improved of late years, and is still progressing. Thrashing machines are imported from England. Within the last seven or eight years more than a hundred have been introduced into the province. Fowler's steam plough was tried in 1868, but the division of the land into small plots, surrounded by trees, prevented, among other reasons, its adoption. Agricultural implements in general are improving. The average yield of wheat, which ten years ago hardly exceeded nine hectolitres per acre, may now be considered to have obtained fourteen hectolitres. This increase is due to the renewal of seed, to its relation and preparation, to a system of thin sowing, and to the care taken of the young wheat.

The cultivation of hemp has improved, so that in some parts of the province the product, for quality, greatly resembles that of the province of Bologna. This plant is, however, exposed to serious injury from the broomrape (*orobanche*), which checks the production wherever it prevails. The disease of the vine has been conquered by means of sulphuration, and the cultivation of the vine in the province has regained its former importance. The humid nature of the soil, however, does not allow the vines to be grown low, as on the hills of the Monferrato, but requires them to be festooned in the trees, and the wine produced has little alcoholic force, with a tendency to excess of acidity. This cultivation, in a wine-making sense at least, might advantageously be abandoned, although, with more care in the selection of the grapes, and in the making, the present quality of wine produced could doubtless be improved. The cultivation of silkworms was formerly attended to with great care, and was tending towards an increase, when, finally, the disease, which for some years had spared, extended its ravages to this province, causing the industry to be given up by some cultivators, the remainder continuing it with diminished energy. The Ferrarese cocoons have always been prized for their beauty, and there was, at one time, a demand for the grain from this province in Lombardy and Venetia.

In the province of Ferrara large estates are, to small, in the proportion of one-third, with a tendency to increase, for want of capital on the part of the smaller proprietors. The system of mixed culture, trees and vines with cereals, &c., prevailing in this province, and which was favoured by the protectionism of former times, has, with the modern facilities of carriage and exchange, become incompatible with the progress of agriculture, and must be abandoned for distinctive cultivation. The rotation of crops, being confined to hemp and wheat, is also defective: it is opposed to the economy of manures, and is considered to foster, more than is generally supposed, the parasitical enemies of the two plants. Until the adoption of a more suitable rotation, a grass crop might be introduced between the wheat

and the hemp, either clover, or *Medicago Coronaria*. Land is, for the most part, farmed under the system of "Boaria," which is considered by competent persons to be among the least happy of the systems of tenancy that flourish in Italy, greatly inferior to the *metayer* system in its effects, both on the landlord and on the tenant—on the landlord from the difficulty he finds in meeting with good and faithful servants; on the tenant, as, except where hemp is cultivated, he is said hardly to be able to keep out of debt.

The number of persons engaged in the cultivation of the soil, according to the census of 1871, was 49,272 persons. The estates are usually divided into farms of 20, or sometimes 30, hectares, with a house, from ten to fourteen oxen, two cows, and the necessary farm implements, which are all the property of the landlord, instead of, as in the *metayer* system, belonging to the tenant. The landlord also provides the seed. In each "versuro," or farm, a family of about eight individuals is attached, composed as follows: Men, the "boaro," or "colono," the head of the family, who has the care of the cattle, ploughs the land, carries and stores the crops, and two "bragliani," or farm labourers, who sow, reap, attend to the vines, &c. Women (three in number): The wife of the "boaro," who attends solely to the household matters, the wives of the labourers, who also work in the fields. Boys: A ploughboy and cowherd. Any other children there may be are not counted.

The "boaro" receives from the landlord, for the services of the entire family, 6 hectolitres of wheat, the same of Indian-corn, 40 or 50 lire in money, one-third of the hemp, or one-half when the ground is dug up by the tenants, a ninth or tenth part of the wheat, and one-third of the Indian-corn as payment for reaping. The tenants have also a share in the butter, cheese, and *ricotta* made on the farm, and a right to one out of four of the calves that may be born. The "boaro" is required to give the landlord a yearly present of eggs, poultry, and pork of the value of about 53 lire, under the term of "onoranza."

The food of the peasantry, for the greater part of the year, is polenta bread for two or three months, pastes, sometimes meat, and generally soup made with lard. Their houses are not very well spoken of, but there is said to be generally room enough for the inmates. The method of cultivation is as follows: The land is divided into "pezze," or divisions, 50 metres broad and 100 metres in length. It first undergoes the operation of "colmatatura," by which the soil is heaped up in an arched shape, replacing draining. The "pezze" run north and south, with drains on either side; the space between each "pezza" is called "strena," and is generally occupied by rows of trees—elm, walnut, or mulberry—supporting the vines. At either end of the "pezza" is a pathway called "cavedagni" or "cappellani," running east and west, and two or three metres wide. The land is ploughed to the depth of 40 or 50 centimetres, with five or six yoke of oxen. After ploughing, when it has to be prepared for hemp to succeed wheat, comes the "ravagliatura," by which the furrows are made by the plough, and are dug out to the depth of another foot with the spade—a process equivalent to subsoil ploughing. Manure is also laid for hemp after wheat, but not in all cases. After hemp, for wheat, ploughing alone is sufficient. In reaping, the straw is not cut low, the stubble, with weeds intermixed, being afterwards cut and used as winter food for cattle.

The Ferrarese horses are strong, robust, and of a

sanguine temperament, with a well-shaped head and powerful neck. Their average height is 1.50 metres. The horses are generally used for draught and agricultural purposes, except ploughing; but the peasants work the soils too young. The principal horse markets are held at Ferrara and Copparo. The condition of the stables is good; the animals are, however, pastured out for more than half the year. The native breed of grey-coated oxen is generally of small size, but strong and robust, crossed, as is common, with the "pugliese" race, it gains in size and strength. When the cattle are no longer fit for work they are made over to the butcher. The system of raising stock might be improved. The stalls are for the most part ill-ventilated, while the well-water is scanty, and saturated with unhealthy elements. These defects are, however, being corrected. But little care is given in the province to the breeding of sheep and goats; and the extensive pasture-lands that it contains are peopled, in great part, with the periodical immigration of sheep from the Reggian, Modenese, and Bolognese mountains. The animals are kept in the open air, for the sake of the manure, especially in the hemp-fields. In mid-winter, when the land is covered with snow, they are fed with dry fodder. The local breed has need of amelioration. The cheese is of inferior quality, and the wool sells for little more than 200 lire per quintal. Lambs and kids are slaughtered for local consumption, and are also exported to other provinces. Of pigs the Italian breed prevails in the province, imported in large numbers from the Umbria and the Romagna for reproduction and slaughtering. The markets are held at Ferrara and Copparo. The styes greatly require improvement. In the absence of acorns the animals are fed entirely on the refuse of grain. In the district of Cento the Reggian breed is preferred. In a province so eminently agricultural as that of Ferrara, the breeding of stock, more carefully attended to, would not only render great assistance to the improvement of agriculture, but itself become an important source of wealth.

LONDON CENTRAL MEAT, POULTRY, AND PROVISION MARKETS.

The Annual Report of the Markets' Committee for the past year has been presented to the Court of Common Council. The total receipts for the several years since the opening of the Market are as follows:

	£	s.	d.		£	s.	d.
1870	49,850	10	4	1874	51,522	2	0
1871	50,554	2	10	1875	53,149	5	9
1872	51,089	1	3	1876	58,254	2	7
1873	51,105	18	1½				

To each of these totals must be added £2,000, the yearly rental paid by the railway companies for the substructure of the Meat Market. The revenue from the New Poultry and Provision Market it brought into account for the first time in the 1876 receipts. The weight of goods brought into the markets during the financial year of fifty-three weeks, ending September 30th, 1876, is as follows:

COUNTRY MEAT.				Tons.	Cts.	Qrs.	£	s.	d.
From railway companies	88,188	7	2	...	9,798	14	2		
" shipping	2,649	15	0	...	294	8	4		
TOWN AND FOREIGN KILLED MEAT.									
From salesmen, town carriers, and slaughtermen	43,634	7	1	...	4,818	5	3		
" toll paid at gates	36,410	7	1	...	4,048	18	7		
" American meat	5,250	0	0	...	583	6	8		
Total	176,162	17	0	...	£19,573	13	0		

Allowing for the increased revenue derived from the Poultry and Provision Market, the tolls show an increase of about £1,000 on the year.

The relative proportions of country meat, and of town and foreign-killed meat, delivered in each month from January 1st to December 31st, compared with the previous year, are shown in the following table:

	1875.			1876.	
	Country.	Town and Foreign.		Country.	Town and Foreign.
	Tons.	Tons.		Tons.	Tons.
January	9,359	5,769	.....	10,276	6,439
February	8,773	5,226	.....	9,226	5,782
March	9,186	5,709	.....	10,738	6,673
April	8,376	6,188	.....	7,730	6,141
May	6,994	5,873	.....	7,435	7,351
June	5,058	6,438	.....	5,732	6,824
July	5,329	6,908	.....	4,529	7,027
August	4,002	6,336	.....	3,807	7,446
September	4,789	6,789	.....	5,751	7,445
October	7,129	7,803	.....	7,009	8,304
November	7,628	7,323	.....	7,897	7,906
December	9,683	6,808	.....	9,365	7,370
Totals	86,076	77,563	.....	89,495	84,712

The quantities of American meat sent into the market during the same period are:

	Tons.		Tons.
January	125	July	209
February	90	August	352
March	240	September	550
April	405	October	734
May	400	November	1,034
June	425	December	1,134

In respect of this the Report remarks: "During the past year the experiment of bringing fresh (unfrozen) American-killed meat into the British Isles has been successfully tried, and has resulted in the importation of about 5,513 tons into these Markets alone, a portion of which arrived in excellent condition during the exceptional hot weather of last August, thus proving its perfect practicability. . . Much of the meat is of superior quality, and will, doubtless, prove of great advantage to the country. . . The supplies have at present been irregular in their time of arrival, and uncertain in quantity, and have consequently interfered with and prevented some other sources of supply. . . No doubt in a short time it will have assumed its proper position among the daily deliveries, and then the full extent of the boon will be appreciated, not only in London, but in the provinces."—Abridged from *The Meat and Provision Trades' Review*.

THE COLORADO BEETLE SCARE.—The Berlin correspondent of *The Times* telegraphs that Professor Gerstaecker, one of the zoologists directing the anti-Colorado measures near Cologne, having discovered that the beetle when depositing its eggs proceeds in a regular curve, the dangerous insect can be traced and destroyed with greater certainty. At the Berlin Agricultural Museum numerous Colorado beetles are being carefully nursed and tended, to afford naturalists an opportunity of studying the habits and customs of the unwelcome intruder. *Land and Water* says: "There is one point we wish to call attention to—it is the preparing for the dreaded invasion of the Colorado beetle by a studied preservation of its enemies. These enemies are, without doubt, rooks. We wish to persuade the owners of rookeries that by sparing the young rooks next spring they would double the defensive force in the country against the expected invasion. Spare the rook and you will stamp out the beetle. The rook is the true 'beetle crusher.'"

THE GERM THEORY.

The following letter from Dr. Tyndall to *The Times*, of July 24th, cannot fail to interest those who are concerned with the question of contagious cattle diseases:—

On the 18th of June I sought, with your kind permission to answer Dr. Bastian according to his deserts. He had given your readers to understand that I took advantage of my position here to enunciate my own views and to exclude his. I, therefore, thought it only fair to show that the Royal Institution did not stand alone, and accordingly asked him whether the very Society to which he belongs, and whose insignia, F.R.S., he takes a just pride in appending to his name, had not declined his communication. The Royal Society, moreover, being an arena for scientific discussion, which the Royal Institution is not, I took occasion to show that when an opportunity for discussion before the Royal Society was afforded him, he did not use it. He has given his reason, with which I do not propose to meddle.

I have no personal or professional interest to serve in this matter, but those who have followed what I have written upon the subject must be aware how profoundly its gravity impresses me. For the first time in human history science grapples with an enemy a thousand times more deadly to man than all the battle-fields of the world—crippling him here, killing him there, and never ceasing to cripple and kill. Let your readers turn for information on this head to the May number of the *Nineteenth Century*, where Sir Thomas Watson strikes the key-note of his article "On the Abolition of Zymotic Disease" with these pregnant words:—

"As life proceeds only from preceding life—as according to the verdict of exact experiment there is no such thing as spontaneous generation—so under similar testimony there is, now-a-days, at least, no spontaneous origin of specific disorders. . . . In those serious and procreant disorders, happening, if at all, only once in a lifetime, the discovery, combined with the arrest, of their several producing causes, is equivalent to the possibility of their total abolition."

In a question of such importance the personal claim to accuracy of either Dr. Bastian or myself is of small moment; still, accuracy even in small matters is desirable, lest the infection of inaccuracy should extend itself to great ones. In addition to others already disposed of I will, therefore, ask you to allow me to correct certain erroneous statements in regard to matters of fact to which Dr. Bastian has committed himself in the last letter which he has addressed to you.

Fifteen years ago M. Pasteur announced that organisms which were killed by boiling in acid infusions survived the same amount of boiling in alkaline ones. Three years ago some very remarkable differences of the same kind were observed by Dr. William Roberts in hay infusions. I had previously experimented upon hay infusions in their natural acid condition; but from these I turned for a brief period aside to repeat some of the experiments of Dr. Roberts. My results did not tally with his, but seeing the extent of the field of inquiry, I closed my first laborious paper in the *Philosophical Transactions* with the announcement that the inquiry was postponed.

Last September I resumed my work, gathering round me hay of various kinds. One of these samples of hay behaved differently from the others. The possible influence of age suggested itself, and the hint was sufficient to cause me to seek through the country for samples of old hay. Lord Claud Hamilton was good enough to send me some from Heathfield. From Colechester I obtained hay five years old, and from other places hay in different stages of desiccation. I hunted the hay-contagium down till I could place my finger on it, and I showed by experiments, long-continued and laborious, the averages it produced among infusions of all kinds.

These results have been in part given to the world, and I am happy to know that they are considered perfectly conclusive by some of the best heads in Germany and England. They will be fully given in a Memoir embracing all the "wild hypothesis" with which Dr. Bastian credits me, but which, nevertheless, the Council of the Royal Society has honoured with a place in the *Philosophical Transactions*. There is no contradiction whatever between these results and my earlier ones. My first experiments are quite as valid as my last, and Dr. Bastian's parallel passages are absolutely irrelevant to the conclusion which he seeks to establish.

What Dr. Bastian says regarding the abandonment of my closed chambers and my "searching beam" is pure fantasy; I have not abandoned them. They have been used in my most recent inquiries, and the demonstrations founded on them will continue valid throughout all time.

What he says regarding unseen germs is also said without knowledge. The germs are seen collectively, though the microscope may fail to resolve them. A patch of blue-bells on a hill-slope is not the less a patch of blue-bells because from a distance you are only conscious of their colour and fail to distinguish the individual flowers.

Dr. Bastian calls my adherence to the germ theory "a conclusion of a foregone nature." Here, as elsewhere, he is entirely wrong. The hay bacillus is an organism as definite as a kidney-bean. It propagates itself by spores. I catch in the air certain particles shaken from hay and sow them in a nutritive infusion which has remained for six months as transparent as distilled water and as void of life. Forty-eight hours after the act of sowing, the infusion is found thick with myriads of bacilli. This experiment, I say, proves to demonstration that the sown particles were the germs of the bacilli, and the test I hold to be universally valid. Dr. Bastian says, "No; your inference is a wild hypothesis. This swarming life arises not from living germs, but from dead, decaying organic dust, whose very death and decay I, Dr. Bastian, will confer on it the power of producing life." To the observed method of Nature he thus opposes the arbitrary fancy of his individual brain, and I repeat that it would be a misuse of words to call this fancy an "interpretation."

Let me conclude by saying that neither the statements marked "1" and "2," with which Dr. Bastian so categorically credits me, nor the words "hasty and erroneous," which he also puts into my mouth, were ever uttered by me.

Here this correspondence, as far as I am concerned, must end. At a future time I may ask your permission to publish a condensed review of the entire question of putrefaction and infection.

"THE RUSSIAN GRAIN TRADE.—The *Gazette of St. Petersburg* gives the following details of the conference lately summoned by the Russian Government for the purpose of considering—first, the quantity of cereals which Russia on an average year would be able to export; second, the mode in which that export could be effected now that the southern ports have been blockaded, and also in the event of the blockade extending to all the ports of the empire. The conference was attended by delegates from the chief railway companies, assisted by persons intimately connected with the grain trade, and from the proceedings it appears that the average export of grain has risen within the past three years to about 143 millions of bushels. The shipments from the Black Sea and the Sea of Azov, with the exception of the ports of Kerch and Eish, amount on an average to about 83 millions of bushels; as this year only 13 millions were exported, it is calculated that about 50 millions of bushels remain in the Southern provinces, to be transported by rail either to the northern ports or to frontier towns. The capacity of the railway system to overtake this increased traffic was the subject of much consideration by the conference, and ultimately a table was drawn up showing the numbers of trains which would require to be despatched daily on each of the lines, so as to meet the demands for transport. From this it appears that if the export is not to be delayed, the number of trains per day on the principal lines must be increased from about 130 to 190, and it remains to be seen whether, when the resources of the companies are so greatly taxed by the war traffic, so much additional work can be got through."—*Economist*.

THE PRESERVATION OF FRESH MEAT.

During the past half century the attention of scientific men and commercial speculators has been directed to the perfecting of various systems of food preservation, having for their chief object the utilisation of the surplus produce of young, partially developed, or sparsely populated countries. Diverse and varied have been the principles on which the processes have been based, and, until very recently, not one of the very numerous patents has ever been a complete success. The tinned meats of Australia, South America, and, more recently, of the United States, are all of them successes so far as real efficiency is concerned; but they are commercial failures in respect of the object for which they were originally intended, inasmuch as they have found but partial favour with consumers. Thus, whilst these cooked meats are excellent in themselves, and deserving of greater attention, the bulk sold is so small that our food supplies are not materially increased thereby; neither are the surplus stores of producing countries sensibly affected by the trade in preserved meats. In this case, therefore, a complete success in one point of view is a partial failure in another. The various extracts of meat may be classed in the same category. The sundried meat or *charqui* of the La Plata States is good and wholesome, but utterly useless for the English market, if intended for human food. Antiseptic agents of many kinds have been used for the preservation of meat; but they have all failed, not in preserving the meat, but in rendering it acceptable to consumers. It is needless to say that the many schemes for injecting these agents into the blood-vessels of slaughtered animals, and absurd suggestions for introducing them into the system with the food during life, have never been attended with the slightest practical success. The most signal failure has been in the attempt to utilise the action of frost, and, strange to say, there are men who, at the present day, still advocate the freezing of meat as a preservative in ordinary and extraordinary transit.

It is perfectly true that organic matter, such as the flesh of animals, will keep literally for ages while it continues frozen; the perfect remains of the extinct mammoth found embedded in ice at the mouth of the Lena in Siberia, and other instances of the kind, will suffice to show the unlimited preservative power of ice. But it has the property, known to every school-boy, of occupying greater space than the water of which it is composed prior to congelation. The bursting of a water-pipe, or the disintegration of a piece of chalk, must have come under the notice of all. In the case of frozen meat the tissues being elastic are not actually broken up and separated as the particles of chalk are, but they are nevertheless broken and bruised to an extent which ensures rapid decomposition as soon as thawing takes place. Every butcher knows this, and accordingly protects his meat from frost to the best of his ability. It is, therefore, a matter of

surprise that the idea of sending frozen meat from Australia to Great Britain should still retain its vitality at the Antipodes, as recent advices seem to indicate. There would be no real difficulty in keeping meat artificially frozen during a voyage round the world, if necessary; and, therefore, if frozen meat were of any use in our markets it could easily be sent. Chilled chambers, in which a low temperature is kept up, have proved partially successful for the transit of meat, and this was the beginning of a variety of projects which have resulted in the discovery of a principle which has proved successful in every respect—scientific, practical, and financial—although until quite recently it has not been perfected in detail.

In 1846 a patent was taken out by Mr. W. E. Newton which had for its object the preservation of fruit and vegetables by keeping them at a temperature "nearly approaching the freezing point of water without being actually allowed to freeze." This appears to have been the inauguration of the principle. From that time to this, hundreds of patents have been taken out which are based upon it. It was not long before it was found that a uniform temperature slightly above the freezing point of water was not in itself sufficient to preserve perishable articles of food. The presence of moisture rendered the processes more or less uncertain in their results, and attention accordingly turned to means by which air could be deprived of its moisture. This has been effected in various ways by the action of lime, sulphuric acid, chloride of calcium, cotton-wool, and many other agents; but the simplest and most effective plan is by the action of cold itself, as will presently be shown. It must be borne in mind that meat, to be saleable in English markets, must not only be fresh, but at the same time in a perfectly natural state and condition. It must not have been treated with antiseptics nor frozen. Cold air, which has been rendered anhydrous or chemically dry, is therefore the only agent which has proved chemically and practically successful. Processes which merely cool the air by passing it over or between ice or freezing mixtures do not provide at the same time for its perfect dryness, and consequently they are only partially successful. Again, the employment of ice entails great cost, from its bulky nature and great weight, as well as the risk of failure from its melting before the calculated time. An instance of this occurred with the Atlantic steamer *City of Brussels*, which was delayed on her passage owing to an accident to her propeller, in which case the meat was spoiled. The processes of refrigeration now in actual use on the Atlantic steamers for the transit of dead-meat may be described as two. In the "ice and salt" process, which is said to be the cheaper of the two, the meat compartment is cooled by pipes through which run water which has been chilled by their passing under and through the ice and salt. The *Inman* and *Cunard* steamers, are fitted in this way. The

other lines of meat-carrying steamers are arranged for the "cool-air" process, in which the air is cooled in the ice compartment, and forced through that in which the meat is hung by means of fans or blowers. Both of the processes are sufficiently effective to bring meat from the American States and Canada to this country, generally in good condition, all the year round. But the air not being perfectly dry, the result is not a complete success, in proof of which may be cited the fact of cargoes coming occasionally to hand "out of condition." At the same time they have succeeded financially, and a great and expanding trade has been established by these means.

If, however, our supplies are to be augmented by contributions from the Colonies, or from South America, which in either case would necessitate a long journey through the tropics, it is evident that no imperfect system will avail, and the employment of ice is out of the question.

M. Tellier's patent, with which the Frigorifique is fitted, may be taken as a type of the processes to which we must look for complete success. It consists in the production of cold by the evaporation of a hydrocarbon such as ether; the circulation of an uncongealable agent, such as the solution of chloride of calcium, in metal pipes; the precipitation of the moisture of the atmosphere by the cold thus produced; and the circulation of the cold dry air thus obtained through an air-tight meat compartment. By these, or similar means, the cold can be supplied for any length of time without a weighty or bulky agent being employed, the air readily deprived of its moisture, and the meat gradually desiccated. In theory, the result is that the germs of animal and vegetable organisms, to which fermentation and putrefaction are supposed to be due, are rendered dormant by the low temperature; that the drying of the surfaces of the meat renders it impervious to the atmosphere; and that the process, if indefinitely continued, would, or should result in the gradual and complete desiccation of the meat, without fermentation or putrefaction taking place. In practice the result should be the preservation of fresh meat in perfectly good and marketable condition, with loss of moisture in proportion to the duration of the process, in transit from the Antipodes to Europe.

This result has actually been obtained. Last week we noticed the arrival of the Frigorifique with her experimental cargo in excellent condition. True to the theory of the patent, the dryness of the atmosphere and uniformity of the temperature, maintained as easily in the tropics as in the English channel, effectually preserved the meat from decay. The loss by evaporation was very considerable, being estimated, as we have previously stated, at about 30 per cent. of the original weight of the carcasses. It is possible that the greater part of this loss occurred during the earlier stages of the process, as the dried surfaces of the meat on its arrival would scarcely admit of sensible evaporation. But of this we are not at present informed. The appearance of the carcasses fully warranted the opinion that they would have kept good for an indefinitely extended trial—in fact,

that they would have dried up without putrefaction taking place. The loss of weight is clearly an exporter's question, and the consumer benefits from having to purchase so much the less water. The beef was smaller and of better quality than we had anticipated, and, greatly to our surprise, produced an abundance of gravy in the cooking. To the taste it was sweet and tender, whilst a haunch of mutton from a four-year-old Merino wether, was simply perfection. The complete scientific and practical success of the experiment is thus placed beyond even the shadow of doubt.

The ultimate bearing of this result on British agriculture it is impossible to foresee. Unquestionably it places our markets within the reach of every meat-producing country in the world; and it is not a little significant that this result should have been achieved at the very time when our Continental neighbours who are within thirty-six hours of our markets are vociferous in their declarations of the impracticability of the dead-meat trade in their several instances. Again, the transit from the North American Continent is but 12 of the 112 days of this trial. If, therefore, the same or a similar process were adapted to the vessels engaged in the trade of the United States and Canada, the twelve days may eventually come to be considered as scarcely equal to the necessary "ripening" of fresh meat. Then it must be borne in mind that the ordinary transit from Australia occupies but three-fourths of the time which has been taken up by this venture, and the journey from the River Plate can be done in one quarter the time. We may therefore conclude that the trial has exceeded anything which is likely to occur in ordinary practice; and although a few weeks, or even months, may make no difference to the soundness of the meat, it would make a very great difference to the loss by evaporation. When all these matters are duly considered, it is impossible to come to a conclusion other than that the British producer has further competition to meet; but this he will not fear if he has a fair chance in the fight. With diseased herds and flocks, and constantly imported supplies of contagium, the British producer cannot compete with the world in meat producing, and therefore we remind him again and again that he must make a determined stand against the continuance of the foreign cattle traffic, in his own vital interest. This point gained, we believe he may, with lessened cost of production and increased profit, successfully compete with all the world in supplying the British consumer with beef and mutton.

MIDDLETON TYAS AND DISTRICT HORSE AND FOAL SHOW.—This show was held on August 23, at Middleton Tyas, near Richmond. Throughout the day it rained incessantly, and the Show-ground was a perfect puddle. Far more people attended than could have been expected under the circumstances. The arrangements, which were under the control of Mr. Pybas Horne, the honorary secretary, and Mr. C. Robinson, the treasurer, were highly creditable. The Judges were Mr. Stowell, of Darlington; Mr. Hutchinson, of Catterick; and Mr. Hopkinson, of Guisbro', for horses; Mr. Rowlandson, of Newton Morrell, for roots and grain; Mr. Brown, of Marake, for dogs; and Mr. Shields Gill, of Brest, for butter. They had to deal with 270 entries, including dogs, grain, &c. Of this number 180 were horses and foals.—*Yorkshire Gazette*.

THE SANDRINGHAM SALE.

The extent of the interest taken in the sale at Sandringham, on August 15, of pure-bred Shorthorn cattle, Jersey heifers, and Southdown sheep, the property of H.R.H. the Prince of Wales, was plainly indicated by the attendance of some five or six hundred breeders and farmers from all parts of Norfolk, and from neighbouring and distant counties. The occasion of the auction was the disposal of surplus stock through the letting of Wolferton Farm, the stock consisting of 26 Shorthorn cows, two calves, and 12 Shorthorn bulls, of the purest strains, 12 of the more and more fashionable Jerseys, 60 pure Southdown shearing ewes, 25 two-shear ewes, 25 three-shear ewes, 25 full-mouthed ewes, 25 broken-mouthed ewes, 30 ewe lambs, 5 shearing rams, 4 aged rams, and 10 ram lambs. All the stock, which were in good health and splendid breeding condition, were sold without reserve. Excellent arrangements were made for the sale, which his Royal Highness entrusted to Mr. Thornton. Every facility was given for inspecting the stock previous to the sale, and the greatest punctuality was observed in all the proceedings.

Mr. Thornton opened the sale by remarking that the large company brought together testified to the popularity of his Royal Highness as a country gentleman, whose example was worthy of imitation by every landed proprietor, for his Royal Highness had improved the land, and endeavoured to increase the food of the people by giving attention to the breeding of live stock. Now that the estate had been improved, some of the land had been let, and so some of the stock would be sold. In founding his herd of Shorthorns, His Royal Highness looked to the stock of the county—to that of those gentlemen who had been the means of improving the county stock during many generations. His Royal Highness had gone for his bulls to Mr. Hugh Aylmer, who stood highest in the county, and who held a high position in the kingdom. They had also been obtained from Mr. Micklethwaite, who might be regarded as the father of Shorthorns in the county. The first object in raising a herd of cattle was to produce good two-year-old bullocks, and this object the Sandringham herd had realised, for it had produced some fine grazing stock.

The following is a list of the several lots and their purchasers.

COWS AND HEIFERS.

Fledge.—Mr. W. Eradfield, 30 ga.
Castanetta.—Mr. H. Goulder, 32 ga.
Feather.—Mr. H. Goulder, 35 ga.
Cassonet.—Mr. Worth, 32 ga.
Coral.—Mr. Hamond, 30 ga.
Friendship.—Mr. J. Rickwood, 36 ga.
Pascake.—Mr. Griffin, Peterborough, 48 ga. Her calf, Mr. Jarvis, 13 ga.
Flight.—Mr. J. Morton, 36 ga.
Peony.—Mr. Briggs, Lincolnshire, 30 ga.
Ceshlong.—Mr. Jarvis, 36 ga. Her calf, Mr. Jarvis, 20 ga.
Louisa.—Mr. Watson, 54 ga.
Wee Wee.—Mr. Briggs, 48 ga.
Iose.—Mr. H. Gorringer, Sussex, 34 ga.
Marguerite.—Mr. E. Heinemann, 46 ga.
Lady Audrey.—Mr. Watson, 44 ga.
Mim Constance.—Mr. A. Hamond, 46 ga.
Charlotte.—Mr. C. Ellis, 27 ga.
Wild Agnes.—Mr. Worth, 23 ga.
Lola Montes.—Mr. A. Hamond, 37 ga.
Lady Burwell.—Mr. Jarvis, 27 ga.
Jessica.—Mr. Durrant, 40 ga.
Lidy A.—Mr. Jarvis, 30 ga.
Neil Gwynne.—Mr. E. B. Sapwell, 29 ga.

Festive.—Mr. G. Day, 12 ga.
Pansy.—Mr. G. Day, 20 ga.
Irene.—Mr. Jarvis, 30 ga.

Total	£	s.	d.
Average of the 26 cows and heifers	86	15	9½

BULLS.

The General.—Mr. J. Morton, 41 ga.
Mr. Francis.—Mr. Hall, 38 ga.
Don Carlos.—Mr. F. H. Colman, Rockland, 29 ga.
Alfonso.—Mr. H. Gorringer, 41 ga.
Ernest Edward.—Mr. Faviell, Sarrey, 46 ga.
Anoop Sing.—Mr. Ellis, 30 ga.
Salar Jang.—Mr. J. Goulder, 31 ga.
Norfolk.—Dr. Cater, 20 ga.
Gamble.—Mr. Perowne, 22 ga.
Criterion.—Mr. T. Faleher, 12 ga.
Fitzgerald.—Mr. Hoff, 20 ga.
Santander.—Mr. Thurgood, 18 ga.

Total	£	s.	d.
Average of the twelve bulls	365	8	0
Gross total for the thirty-eight Shorthorns and two calves	1,321	19	0
Average	34	15	9

Twelve young Jersey cows and heifers, all bred on the farm during the last thirteen years from the noted herd kept at the Prince Consort's Shaw Farm, Windsor, and from Lord Camoys' stock, were next offered, and realised a total of £276 3s., or an average of £23 0s. 3d. Sir William Knollys bought two at 28 and 20 guineas, and Mr. Garrett Taylor (for, we presume, J. J. Colman, Esq., M.P.) two at 27 and 23 guineas. The highest price 34 guineas, was given by Mr. Badham, and the other buyers were Messrs. Foljambe, Looker, Deane, Henty, and Hall.

Lastly came the Southdown sheep. With the exception of one lot bought by Mr. J. E. Groom, the whole of the ewe lambs were sold to Mr. Radford, and fetched £71 17s. 6d.

The purchasers of shearing and aged rams were as follows:—

SHEARLING RAMS.

Young Dine, Mr. J. B. Aylmer, 18 ga.
Son of Young Duke, Mr. Fookes, 13 ga.
Son of Old Duke, Mr. J. B. Aylmer, 7 ga.
Son of Old Duke, Mr. Jarvis, 12½ ga.
Son of Fakenham, Mr. Barker, 6½ ga.

AGED RAMS.

Dine, Sir Wm. Salt, 28 ga.
Son of Southampton, Mr. John Overman, 31 ga.
Son of Old Duke, Col. Kingscote, 10 ga.
Son of Old Duke, Mr. Barker, 7½ ga.

The rams thus fetched altogether £140 3s. 6d.; or an average of £15 11s. 6d. The ten ram lambs sold for £42 3s., and the buyers were C. S. Read, Esq., M.P., Dr. Cater, Mr. Brackenbury, Mr. Hall, Mr. Cooper, Mr. Hoff, and Mr. F. M. Jones.

Altogether the sheep made £989 14s., which added to the £1,598 2s. for the cattle, give a total of £2,587 16s.—a result highly satisfactory, as may be gathered from the very interesting fact that before the sale commenced we were shown the figures of a valuation made on the previous evening by Mr. Henry Woods, of Merton, at the request of the auctioneer, in which that gentleman had put the probable proceeds at £2,610, thus showing a difference between the estimated and the actual result of but £23.—Abridged from *Norfolk Chronicle*.

MR. JAMES GORDON BENNETT intends to start a daily newspaper in London, similar in style to the *New York Herald*, of which he is proprietor.—*Coming Events*.

IMPORTS FROM THE UNITED STATES.

A report by Mr. Plunkett on the commerce of the United States has recently been issued from the Foreign Office. From an elaborate summary published in *The Globe* we extract the following:

Speaking in round numbers, it may be said that more than one-half of the exports from the United States are made up of breadstuffs, mineral oils, provisions, and tobacco leaf; and if we add to them the one item more of raw cotton (187,663,485 dollars), we find that the five together represent about four-fifths of the total amount exported in 1876. In order to illustrate more clearly the extent to which the export trade of the United States depends on raw, or only partially manufactured, articles, Mr. Plunkett shows that of the total domestic exports last year less than 11 per cent. consisted of manufactured articles, and that they showed an increase of only 377,886 dollars (\$275,571) over the previous year. Breadstuffs represent about 20 per cent.; raw cotton, about 20 per cent.; mineral oils, nearly 8 per cent.; provisions, about 13 per cent.; tobacco leaf, about 5 per cent. of the total domestic exports, excluding, of course, coin and bullion. The steady, although small, increase in the exportation of American manufactured cotton goods has, says Mr. Plunkett, attracted much attention, and has inspired great hopes on the American side of the Atlantic, while causing some anxiety on the other. While the importation of cotton goods has fallen off by nearly one-fourth, the exportation of cotton goods has almost doubled itself in the twelve months; and on a review of the whole four years it appears that not only has the importation of foreign cotton goods in that period fallen off almost to half what it was, but the exportation of American cotton goods has nearly quadrupled itself.

Mr. Plunkett gives the following facts bearing more directly on the trade between Great Britain and the United States: By far the largest amount of breadstuffs went to the British Isles. They took, in round numbers, over 91,000,000 dollars' worth of breadstuffs out of a total of somewhat over 130,000,000. Provisions also were exported chiefly to the British Islands. They took over 56,000,000 out of a total somewhat exceeding 84,000,000 dollars. A new and singular feature in the provision trade between the United States and Great Britain is the increasing exportation of fresh beef, which is killed on that side of the Atlantic very largely indeed as far away as Chicago, and is then sent over in ice to Liverpool, where it is sold at a lower rate than beef of the same quality can be bought for in the retail markets of New York. At the present low ruling of freights between American and English ports, this trade is found to be remunerative, and measures are being taken for carrying it out on a still larger scale. The best customers for American iron and for manufactures of iron and steel were the British North American colonies.

DURBAN.

The following is an extract from the letter of a resident in the Colony:

I enclose a bird's-eye view of Durban, as seen from the Cerca hills. The fore-ground is a low, flat, swamp of coarse grass, bulrushes, and sand, or what is here called a "vley." Between it and the town is a narrow belt of bushes. There is the beautiful bay, with ships at anchor. It is two miles across from the town to the hills opposite, which are about 300 feet high, thickly wooded, and swarm with monkeys, snakes, and other wild animals. A lighthouse on the end, called the bluff, on the left of which you catch a glimpse of the harbour bar and Indian Ocean. The narrow strip of land just under the lighthouse is called the Point, on which are the wharves and landing-places. It is three miles from the town, by which it is connected by a railway. You may readily perceive that Durban stands in a low, flat situation, scarcely above the level of the sea. But it is well situated for commerce, there being no other ports nearer than East London on the south, and Delagoa Bay on the north, each about 250 miles distant. All the trade of the colony, and most of that of the Free State and Transvaal, passes through it.

You are aware that England has recently annexed the latter to her South African possessions. It is said to be a fine country, as large as France, with a salubrious climate—more so than Natal—and with much better land. It is here the gold fields are. They are making a railway from Durban to Maritzburg. It is a much narrower gauge than I ever saw in England, but little, if any more than a yard wide between the rails. It will be a year, if not two years yet, before it is opened.

Durban is about the size of Sudbury. Its population consists of about four thousand white people, and two or three thousand Kaffirs, Indian coolies, Chinese, French creoles, &c. The whole of Natal contains no more white population now than it did twenty years ago, which does not look like being prosperous, but is a proof that quite as many, if not more, people leave it than come into it. Notwithstanding all that has been said and written about its wonderful fertility, it appears to me to be but little better than a barren waste. Everything is scorched up by the sun the greater part of the year. There is supposed to be not more than one acre out of every hundred, take the colony through, under cultivation. The principal article of cultivation is the sugar-cane, a few patches of coffee, maize, and sweet potatoes. The fruits that thrive best are bananas, pine apples, oranges, and lemons, which are now in season and plentiful; but grapes we never get.

We depend entirely upon Australia for our bread-stuff, which is imported in the form of bags of flour (chiefly from Adelaide). There is no such a thing as a flour-mill in Natal. Our chief exports are sugar and hides. Vegetables are always very scarce and dear. They talk now of sending to England for potatoes. We get no good meat here; the beef is as tough as old leather. It might be supposed that we should get very tender beef, because the poor oxen are driven for many years up and down the country, and hammered about most unmercifully by Kaffir drivers whilst they are drawing the loaded waggons; but it does not appear that such treatment causes their flesh to be more tender when killed. Such a common and necessary article as milk is sold here at 8d. per pint, and eggs, 3d. each. Bread more than doubles the price at home, and likely to go up. Beer is 6d. per pint, and there is no water fit to drink in Durban except the rain water, which they catch and keep in tanks and barrels. The walls contain only beastly stuff that drains off the surface.

This country swarms with all kinds of abominable reptiles and insects. The sprightly English Sea, or bath-some London bag are respectable members of society compared with some of the horrid things we have here. I wonder there is not more sickness here than there is. This is not a desirable place to live in except for business. This climate does not suit everyone. I know several that have been obliged to leave it. People who have been here many years look much older than they are, and those that are born here lose their teeth very early; this is attributed to the water. There is a fine opening here for a dentist. There is only one here, and he has made his fortune through exorbitant charges and much practice, and become quite easy and independent. They say it would be a good speculation for anybody to bring out a load of false teeth.

NOXIOUS INSECTS.—Among the many projects for the extinction of noxious insects is one which certainly has the advantage of being original. Many of the pests to vegetation are restricted in their food to one plant. It is proposed that the farmers in a wide section do not raise the plants necessary for such insects for one season, and the argument is that the insects being deprived of their food will die off, and that the crops after the famine will be un molested. What will they do about the wild genus.—*Friar's Farmer.*

THE SCOPWICK RAM SALE.

The season for the sale of Lincolnshire long-wool rams was inaugurated on Aug. 23, at Scopwick, when the flock of Mr. Charles Clarke was submitted to public competition by Messrs. Briggs. The Scopwick flock is one of the best and eldest in the county, and the blood is held in high repute by breeders generally.

Mr. Briggs conducted the Sale. The biddings for the first eighteen lots were unusually spirited; but later on many of the sheep were disposed of at less than half their value. Lot 3, a very handsome shearerling, was knocked down to Mr. C. Clarke, of Ashby, for 75 gu., and the same gentleman secured Lot 11—the handsomest sheep on the ground—for 75 gu., after a spirited competition. Lot 4, a very neat little shearerling, was purchased by Mr. Holland, of Market Deeping, for 35 gu.; Mr. C. Tindall secured for Mr. John Torr, M.P., Lot 5—one of the biggest shearerlings we ever saw—for 36 gu.; and Mr. Haak and Mr. W. Dudding each gave 30 gu., for remarkably handsome shearerlings, Lots 6 and 7. A grand up-standing shearerling, Lot 13, was knocked down to Mr. Harwood Maskinder, for 45 gu. The 50 shearerlings realized £377 9s., an average of about 216 11s. each. The following is a list of the purchasers of the several lots:

Lot	gu.	Lot	gu.
1—Mr. W. Dudding	11	26—Mr. Stephenson	20
2—Mr. B. Briggs	9	27—Mr. Phillips	8½
3—Mr. C. Clarke, Ashby	75	28—Mr. Lamb	8½
4—Mr. Holland	25	29—Mr. Walker	21
5—Mr. J. Torr	36	30—Mr. Bourne	7½
6—Mr. Haak	30	31—Mr. Swift	5½
7—Mr. W. Dudding	30	32—Mr. Phillips	7½
8—Ditto	15	33—Mr. Swift	5½
9—Mr. J. Byron	16	34—Mr. Graves	9
10—Mr. Smith	38	35—Mr. Robt. Howard	18
11—Mr. C. Clarke, Ashby	75	36—Mr. Oliver	15½
12—Mr. B. Briggs	10	37—Mr. Swift	5½
13—Mr. Twidale	12	38—Mr. F. Bartholomew	17
14—Mr. Stephenson	13	39—Mr. J. Torr	7
15—Mr. Bruce Tomlinson	17	40—Mr. Lamb	9
16—Mr. Bourne	5	41—Mr. W. Gilbert	18½
17—Mr. J. Borman	12½	42—Mr. Monk	6
18—Mr. H. Maskinder	45	43—Mr. Pepper	14½
19—Mr. W. Dudding	8	44—Mr. Pears, son	6½
20—Mr. Oliver	7½	45—Mr. W. Dudding	8
21—Mr. Minto	17	46—Mr. Pears, Hackthorn	6½
22—Mr. Pears, Hackthorn	8	47—Mr. Holland	18
23—Mr. J. H. Caswell	50	48—Mr. Godson	6
24—Mr. Swift	6½	49—Mr. B. Briggs	8
25—Ditto	5½	50—Mr. Borman	6

HARVEST PRICES.

A CORRESPONDENCE.

Rathfriland, Dublin, August 15, 1877.

Dear Sir,—From a letter of yours in the *Times*, it appears that you can get your corn crops out and carted and threshed for 12s. 6d. per acre, you (as I understand) supplying reaping machines, horses and carts, but no men.

Twelve shillings and sixpence per statute acre is equal to 20s. per Irish acre, and my experience, and that of others whom I know, is that we would consider ourselves fortunate to get the work done for, say, £3 10s. the Irish acre, equivalent to 21 11s. 6d. per statute acre. Our harvest wages are 3s. 6d. per day for men, and 2s. for women, and weight of straw 3 to 3½ ton per Irish acre.

If it would not be trespassing too much on your valuable time, would you kindly inform me how you manage—how many hands attend the machine, and what quantity is cut, bound, and stacked per day?—and any other hint would be most thankfully received.

I had the pleasure and profit some years since of visiting Tiptree farm about three or four weeks before harvest.

Will you kindly accept a little essay of mine, which I send you, and for which I obtained a prize in public competition in 1865. I am conscious of its many defects, but adhere to the principles expressed in it 13 years ago.

The crops in this county, as a general rule, promise well—oats and barley, the principal cereal crops of Ireland, have good head and grain full. Cutting will commence in about a week, if the weather is favourable.

Turnips promise well; also potatoes. There has been a scare about the blight in the latter, but I have not seen any of it.

I am, sir, yours faithfully,

J. J. Meehi, Esq.

Tiptree Hall, Kelvedon, Essex,
Aug. 17, 1877.

Dear Sir,—I cheerfully comply with your request. The harvesting is done by my old faithful workmen, several of them having been with me for 30 years. They are good, quick labourers. They mow wheat, barley, and oats with the scythes where the machine cannot work. One binder has to make haste to tie to one mower. When the reaping machine can work all round the piece, it will keep six to eight binders at work; the men provide the driver.

It is very remarkable that while at 12s. 6d. per acre my men earn 6s. 6d. per day, your men only earn 3s. 6d. at 31s. 6d. per acre. Surely day-work is a sad mistake. We do not employ women at harvesting.

We do not use waggons, which are (and have been proved to be) a great agricultural mistake and waste of time and money. We use long, light 1-horse carts. They are about 12 feet long and 7 feet wide over the wheels.

When the wheat is good, with abundant straw, one pitchfork and one loader will (as in 1868) send to the stackers 80 qrs. in one long harvest day. That quantity was also passed through the thrashing machine on that day, the sheaves being thrown into the machine instead of stacking.

I frequently look to my watch when thrashing, and think the wheat yields well when a sack (4 Winchester bush.) comes through in three minutes (10 qrs. per hour); more than this has been sometimes done. Small boys bring home the loads, and there is no binding of the load with cords.

Our people would have no patience with the lumbering old waggons, emblems of a slow agricultural age. My fields are open and free from fences and obstructions, and there is also a good main road. On 100 acres I have only one low fence. Fences and trees will not profit enough to pay rent, tithes, rates, and waste. My back road answers as a headland for two large fields. If we are to compete successfully with foreigners, all these old-fashioned prejudices and practices must be reformed; and I hope that our landowners are coming to think so. Your prize essay (for which I thank you) well deserves the reward it obtained.

I threshed part of one field yesterday, and it yielded 5 qrs. per acre of good wheat; and I hope and believe I have several other fields nearly as good, one better, I think; but still, in a grand season, I have grown much more. In 1863, a good year, I averaged 7 qrs. of wheat per imperial acre, including Rivett wheat; and one field of white wheat yielded 8 qrs. per acre, and sold right away at 63s. per qr.—£51 4s. per acre. I only gave £25 per acre for the freehold of the land, so the straw, which realised £4 per acre, was an additional gain. Plenty of rich shed manure and the cake-fed sheep-fold are the causes of large crops on well-drained and deeply cultivated soils free of weeds.

The history of the cost of producing a quarter of wheat, derived from every county and district of the United Kingdom, would be a useful, astounding, admonishing, and awakening document.

I cannot afford to grow weeds among corn or other crops. The prevention or removal of them is one of the most profitable of operations.

I think, from observation, a reform in haymaking in your county would make the agricultural purse more heavy.

I usually grow on my 170 acres (imperial):—

Wheat	56
Barley	20
Oats	9
Peas (picked for London)	20
Red clover	20
Italian rye-grass	12
Mangel	7
Kohl-rabi and cabbage	6
Permanent pasture	6
Winter tares	6

Total 163

I am, dear sir, yours truly,

J. J. MEECHI.

FARMING IN KENTUCKY.

In many respects Kentucky is probably one of the most desirable regions in America. It has an excellent climate—moderate rainfall and mild winters—it undulates gracefully, is beautifully wooded, and adorned with handsome palatial residences and magnificent gardens, which lead to the lovely landscape an air of affluence and genuine social enjoyment and a settled aspect not to be observed in many other parts of the States. The extent of wood in the State is equal to 48 per cent. of its whole area, which measures 24,118,000 acres. The population in 1870 was 1,321,011. Limestone is the surface rock in the greater part of the State, and the soil is a kindly, fertile, light-coloured loam, quite plentiful in the lower parts, but scarce on the hilly regions. It is probably not so rich as the soil of a large area of Illinois and similar States, but then it is very sharp and productive, and, by virtue of its limy character, is specially adapted to the production of grass. The "Blue Grass Region" of Kentucky, which includes the whole of five counties and part of several others, is one of the famed spots of America. It is almost unequalled for the richness and durability of its pastures, is well sheltered from wind, and equally well shaded from the sun; and barring its multitudinous army of restless insects, it is probably one of the best stock districts on either continent. The blue grass is the universal garment of the soil, and though it seldom grows quite long enough (for want of moisture) to make hay, it affords not only abundance of summer pasture, but also, if preserved, plenty of fodder in winter. This much-talked-of grass seems to be none else than the *Poa Pratensis* of the English meadows; and though there is diversity of opinion on the subject, the most generally accepted and best supported idea is that the blue grass seed was first imported from England to Virginia, and afterwards from there to Ohio, and thence to Kentucky, about a century ago. Blue grass seed is in great demand all over the older settled States, and Kentucky farmers realise considerable sums by stripping the seed from the fields by implements that run like reapers, and selling it. It yields from 2 to 10 bushels per acre, and brings from 30 to 50 cents per bushel.

Kentucky has been well settled for more than half a century, and very few of its pioneers are now alive. Their sons, in fact, have grown grey, while their great-grandchildren roam about in happy childhood. A few farms change owners every year, but there are probably fewer transactions of this kind in Kentucky than in any other State in the Union. The increase in the value of land has been very slight for ten years, and many experienced farmers say it is not likely to increase very largely for some years to come. Current prices range from 65 to 150 dollars per acre (£13 to £30), according to locality, quality of land, and value of improvements. Less draining is required here than in Illinois, and the improvements consist mainly of houses, fences, and roads. The main thoroughfares of the State are good turnpikes, and so also are many of the private roads. Fencing is pretty complete, though in many cases it is feeble and temporary. The most general fence is the uncivilised-looking Virginian rail fence, which consists of rails of wood built up in something like the system on which I have seen wooden fences stored in the old country, and which, to put it mildly, is a great waste of both soil and timber. Drystone dykes and orange hedges enclose some farms. The dwelling-houses generally are excellent, and the stables for horses and Shorthorns are good; but for the ordinary cattle scarcely any house accommodation is provided in any part of the State.

The arable area of Kentucky in 1875 was 3,233,143 acres, exclusive of 206,349 acres under tobacco. Indian corn occupied 1,807,807 acres; wheat, 796,000; rye, 94,017; oats, 295,238; barley, 11,707; potatoes, 16,836; and hay, 211,538. Indian corn averaged 33 bushels per acre, worth 41 cents per bushel; wheat, 10 bushels, worth 1 dollar and 5 cents; rye, 11 bushels, worth 91 cents; oats, 21 bushels, worth 46 cents; barley, 20 bushels, worth 90 cents; potatoes, 98 bushels, worth 49 cents; and hay, one ton and a-half, worth 14 dollars and 25 cents per ton. The cost of raising these grain crops (exclusive of interest on value of land) may be stated at from 6 to 7 dollars per acre, so that in 1875 the profit per acre from Indian corn would have been about 6½ dols., or £1 6s.; wheat about 4½ dols., or 18s.; rye 4 dols., or 16s.; oats 3½ dols., or 14s.; and barley, 11 or

12 dols., or £2 4s. or £3 8s. This year the crop promises better. Wheat especially looks well, and it is expected that it may reach an average yield of 18 or 20 bushels per acre. Winter wheat is sown almost for all, and is usually ready for harvesting in the last two weeks of June. It is now all in stock or thrashed and sold. Wheat is now selling at 1 dollar and 30 cents per bushel, and, of course, this high price hastens farmers with thrashing. The quantity of hay raised in Kentucky is great, but a very large portion of it is used for horses, the rearing of trotting horses being a prominent feature in the rural economy of the State. Timothy and clover are sown largely for hay, and grow well. A very large portion of the blue grass region has never been cultivated at all. It has only been thinned of wood and bushes, and now it carries rich pastures of blue grass, "red top" (a coarse natural variety of grass), and white clover.

The number of cows in Kentucky at the 1st of January, 1876, was 244,700, and their estimated value £5 13s. a-head; and of oxen and other cattle 389,600, estimated at £4 4s. a-head. Leaving out the Shorthorns, which are so numerous as to demand special notice, the general cattle stock of the State is not one whit better than that of Illinois—that is, the percentage of improved cattle or cattle containing Shorthorn blood is not larger here than in Illinois—while the common cattle of the two States are very much alike. It might have been thought that where so many Shorthorns have bred for so many years as has been the case in Kentucky, almost every animal would by this time have the stamp of the fashionable Shorthorn upon it; but the fact is, and facts must come out—(I may refer more fully to it afterwards)—Shorthorn breeding in America has been so conducted that the country generally has derived but very little benefit from it in comparison to what it ought to have done. Fewer steers are fed in Kentucky now than there were several years ago, owing mainly to the increased attention bestowed on Shorthorns and horses; but still upwards of 30,000 beef steers leave the blue grass region every year, averaging in weight alive about 1,500 or 1,600 lb. Of these, probably not more than one-third show Shorthorn blood, while only about one-tenth would rank among average Scotch crosses or grades. I examined a lot of three-year-old steers in the blue grass region, the other day, that would barely come up to the average of Scotch crosses of the same age, and three experienced Kentucky farmers, who accompanied me, asserted that they could not find more than 3,000 three-year-old steers in the State that would equal or surpass these.

In Bourbon county, in this neighbourhood, a few exceptionally fine lots of high-grade steers are fed off every year, weighing close on 2,000 lb., at three and a-half years, and these seem now to be mostly all finding their way into the British markets. Messrs. Bedford, Kennedy, and Ferguson, of this town, represent Mr. Eastman of New York here, and every week they send him over 300 head of the choicest steers to be had. This firm has just purchased and sent through Mr. Eastman to Messrs. Bell and Lewis, of Glasgow, five three-year-old Shorthorn steers averaging 2,000 lb. in weight, and bred by Mr. F. P. Bedford, Bourbon county. They are meant to represent Kentucky at British fat stock shows. Mr. Buckner, also of Bourbon county, bred high-grade cattle for many years with so much care and liberality that his herd became a strong rival in individual merit to the best Shorthorn herds in the State. He fed his cattle almost exclusively on grass in the open field all the year round, and allowed to each animal about four acres of grass for the twelve months. He dispersed the main part of his herd about a year ago, but has retained about a dozen of the best of his cows for a new start. These are, on the whole, as fine a lot of grade cows as I have ever seen—by far the best I have seen in America.

Very few steers are fed by their breeders. Stock men and farmers who do not feed many, buy up steers in the Fall, when about thirty months old, and feed them in open fields (no shedding here) during winter with Indian corn, and perhaps a little hay or corn fodder, and then graze them all summer, and sell them off as beef in the Fall. The more enterprising farmers handle only the best lots, and feed them pretty liberally when they have them. They go round in summer and select those choice steers in small lots, sometimes as small as two and three, and take delivery of them in the fall. The demand for the better class of steers is unusually active this

season, and already they are almost all bought up at 5 and 5½ cents per lb., or about one cent per lb. above the buying price of last year. When bought lean these finer steers will weigh about 1,300 lb., and during their breeding year they will take on between 400 and 500 lb. It is expected that this year a little over 8 or probably 8½ cents per lb. may be obtained when the steers are fat, which would make the value of a 1,700 lb. steer from 105 to 110 dols., or \$21 or \$22. The cost of a 1,300 lb. lean steer last fall (at 4½ cents per lb.) was 51 dols., or \$11 12c., which would leave a balance of about 60 dols. for the year's feeding and profit. During the winter of six months (supposing the steer is a year in his feeder's possession) a steer consumes about 60 bushels of Indian corn,

worth about 20 dols.; and then the grass he eats during the other six months, if rented, would cost twelve dollars (two dollars a month). Salt and labour would cost another two dollars, and thus the total cost of the year's feeding (minus incidental expenses) amounts to about 34 dollars, or \$6 10c. The profits this year will be larger than for a long time back, and they are not likely to be so large again for some time—that is to say, the buying price is not likely to be so low as it was last year. Farmers generally consider that 40 dollars a-head would pay well for a year's handling. The better class of Kentucky steers—those referred to in the above calculations—would probably dress from 55 to 60 lb. of beef to the 100 lb. of live weight, and thus with carriage, which would add barely half a cent per lb., the cost of their dressed beef in New York would be from 10½ to 12 cents, or from 4½d. to 5½d. per lb.

The demand in Kentucky, as all over America, for improved Shorthorn bulls is growing steadily, and greatly increased attention is likely to be bestowed on the rearing of cattle of good quality. Farmers are beginning to realize better than ever the advantages to be derived from the raising of the best possible class of cattle, and they know that it is by using Shorthorn bulls, and in that way only, that they can convert their inferior herds into animals of good quality. Kentucky farmers do not think that the cost of beef-production will increase very largely for, at any rate, ten or fifteen years, but they think that by that time there will be ten improved steers for every one at the present day. They think the exportation trade will bring about great improvement in the general cattle stock of the country, by creating a reliable and profitable outlet for the better quality of beef.

The number of sheep in Kentucky in 1876 was 683,600, and their assessed value barely 11c. a head. The flocks are mixed and inferior. A number of good Southdowns have been imported within the past few years, but it is a pity to see such an inferior class of sheep occupying so rich a country. In the same year hogs numbered over a million and a half, and were valued at \$1 2c. a-head. Berkshire predominate.

In this State farm servants get about 15 dols. a month (\$18 a half-year) and their board.—*Scotsman*.

THE BRITISH ASSOCIATION AND THE COLORADO BEETLE.

At a meeting of the British Association, on Aug. 28, great interest was excited by a discussion upon the Colorado beetle. Mr. McLachlan introduced it by a paper in which, after describing its entomological classification, its structure, habits, and general characteristics, he passed on to refer to the panic created in this country, owing to the danger of its becoming acclimatized. That panic he unequivocally condemned as likely to result in mischief rather than in good, though he by no means under-estimated the danger. The bill passed by the Duke of Richmond in the expiring days of the session was, in his opinion, a hasty piece of legislation, forced upon the Government by the panic which had suddenly seized the public mind because certain sensational paragraphs had of late been published in the newspapers. He could not altogether see why such an act had been passed this year. Just as much necessity for such legislation existed four years ago as existed now. He did not object to the legislation in itself so much as the panic which had produced it, and he thought it would have been better had the Government taken time to consider its proposals. Passing from this point, he discussed the question of the danger which was run by Europe of having the beetle imported. This raised the question of the importation of potatoes from America and the conditions under which that

importation occurred. He believed that very few potatoes were imported to be used as food; but a considerable quantity was brought over to be used for seed. Well, these latter were always sent across in the cleanest possible condition. All earthy matter was washed away from them, so that it was almost impossible for the eggs to be imported. Unless, therefore, American potatoes were sent to this country in far larger quantities and under more careless conditions there was little to fear from their introduction by means of that agency. But as it had been asserted that the quays of New York have been known to swarm with these creatures, he thought more danger of their general importation lay in this cause than through the carrying of potatoes. There was another channel through which the insects might become obnoxious in this country. It was possible that the beetles might be sent over, not to gratify the curiosity of entomologists, but to be exhibited to the vulgar. Ignorant persons might become possessed of them, and they might be turned adrift out of a pure spirit of mischief. For himself, he could see no cause for alarm in respect to the British Islands. He admitted, however, that grave apprehensions might be entertained with respect to the Continent. Even admitting that the beetle would be introduced into England, the question arose would they be able to propagate to such an extent as to become dangerous? He himself did not think so. Our climate was too damp for the beetle. Very possibly the insect might in time accommodate itself to new conditions of climate as, indeed, it had already done since it left its original home in Colorado. But he saw no ground for the unreasoning panic that had prevailed. As to artificial remedies, Paris green was the best, because it destroyed the insect without injuring the crop. In conclusion, he hoped that before sensational paragraphs were sent to the newspapers their authors would take care to acquaint themselves as to the accuracy of their assertions. Naturalists were to be found in all large towns, and to these should be submitted for inspection all insects supposed to be those which had committed such devastation.—Mr. Gwyn Jefferys concurred in the view that a great deal of unnecessary alarm had been caused in the country by reports based on ignorance and mistakes.—Professor Jones intimated that Lady Hooker had received a letter from her husband, Sir J. Hooker, in America, containing the curious statement that the beetle did not feed upon the potatoes in Colorado, which was its native home.—Mr. Broom Napier suggested that Government ethnologists should be appointed for each country, as was the case in the United States, by which means proper information was obtained when a strange insect appeared.—Professor Newton wished to know whether it was true that the beetle had also attacked carrots and parsnips. He dwelt upon the fact that American animals had never become naturally domesticated in Europe, and that possibly the beetle might not find our climate congenial.—Mr. McLachlan was unable positively to say whether carrots had been attacked by the insect, as suggested. The discussion closed with the customary vote of thanks.

"STEAM SUPERSEDED."—The death is announced of Mr. William Wallwork, who was engaged maturing an invention which he styled "a new motive power, to supersede steam," and which it is stated he completed about six days before his death took place. It is stated positively that the machine has been worked by Mr. Parr, and fully justifies what Mr. Wallwork had stated to him it would do. Its power, he stated, was unlimited—of course increasing the strength of the material—and at a trial it blew off air at a pressure of 40 lb., as tested by a patent steam gauge. Mr. Mason (says *The Penderbury Times*) is patenting the invention—which is extremely simple in construction, and is a wonder to those who have witnessed it how it has been kept so many years in abeyance—at a considerable cost in all countries. It will be put to a large engine and tried practically in the place of steam. Having no fire, of course it emits no smoke, works without noise, and the first machine, it is said, will do the work of a 50-horse power engine, yet it takes up so little room that a light cart and one horse carried it all the way, including the patterns. If all this turns out to be correct we may look for a revolution in the engineering and manufacturing world; and Mr. Mason, a practical man, is sanguine as to the results.—*Public Opinion*.

AGRICULTURAL SOCIETIES.

BURY.

The seventh annual exhibition of the Agricultural Society was held on Aug. 23, at Fishpool, Bury. The weather, fortunately, proved fine, and there was a large attendance of spectators. The exhibition was of an average character, the stock shown being, as a rule, good, but the number of entries was smaller than usual. The horned cattle were an average show, both in regard to number and quality, and the sheep, although not numerous, were of good quality. The farm produce was, however, considerably below the average. The Society unfortunately, commenced the present season involved in debt, and a general feeling exists that unless the debt is cleared off by the proceeds of the present exhibition, the Society will come to an end, at least for some years, but, for the credit of the agriculturists of the district it is to be hoped such will not be the case. The entries numbered upwards of 1,190, including 47 of cattle, 24 of sheep, 127 of horses, 135 of dogs, 76 of pigs, 26 of implements, and 217 of poultry. In the classes for horned cattle the chief prizes were secured by Mr. T. Atkinson, of Unsworth, who exhibited 10 animals and obtained 10 prizes, 8 being first prizes. First prizes were also obtained by B. Lee, Bullnape Hall, Preston; Mr. Dugdale, Mytton Bridge. The Stand Stud Company, Whitefield (8); E. Baker, Todmorden; A. Wardle, Bury; W. Smith, Bury; and R. Marcor, Tottington. The classes contained many excellent animals, but it is matter of regret that several which were open only to the tenant farmers of the district were but indifferently filled. The classes for horses were one of the best features in the exhibition, the agricultural or draught horses being exceedingly good. The Stand Stud Company were by far the largest exhibitors, and in the classes for agricultural horses they obtained four first and three second prizes. First prizes were also obtained by C. W. Wilson, Kendal; W. A. Meadows, Rainhill; Mr. Brierley, Prestwich; J. Butterworth, Pilsworth; R. Chambers, Whitefield; and G. F. Statter, Stand. For saddle and harness horses first prizes were taken by S. Norbury, Wilmslow; the Stand Stud Company; G. F. Statter; J. W. Crowther, Mirfield; Mytton Farming Company, near Whalley; B. Lee, Preston; T. Jackson, Unsworth; W. Lucas, Farncliffe; and J. Windle, Salterford. First prizes were also secured by R. Millet, Bury; S. Blunt, Bury; Bland and Sons, Bury; and R. Lindsey, Roach Bank. The chief prizes in the classes for pigs were obtained by the Earl of Ellesmere, who secured five first and three second prizes for eight very fine animals. First prizes were also obtained by S. Wilson, jun., Ramsbottom; A. Crowther, Bury; J. and J. Nuttall, Heywood; R. Ward, Bury; and S. Yates, Bury. In the classes limited to the district of Bury J. and J. Nuttall obtained six first prizes. Sheep were not numerous, there being but 24 entries, and of these 11 were made by G. Dewhurst, Rawtenstall, who obtained three first and three second prizes. First prizes were also awarded to J. Taylor, Rawtenstall; S. Taylor, Rawtenstall; R. Ormerod, Worthome; and S. Statter. There was an excellent show of poultry, and upwards of 235 entries of dogs, the latter including many first-class animals, and those two departments increased largely the general attraction of the show. The vegetables, fruit, and farm produce had evidently suffered somewhat from an unfavourable season.—*Manchester Examiner*.

CLEVELAND.

The forty-fourth annual show of the Cleveland Agricultural Society took place on Aug. 25, on the Redcar Race-course. The show of cattle was very good. The number of horses shown was considerably in advance of last year, and the animals were generally in good condition. Sheep and pigs were a fair average show, and in number also were greatly in advance of last year. The attendance of the public was very large. The following is the number of entries, viz:—Cattle 37; Sheep

37; Pigs 21; Horses 288; Poultry, &c., 145; Implements 14.

PRIZE LIST.

SHORTHORNED CATTLE.—Open to all parts of the United Kingdom.—Bulls any age, 1, G. Yeates, Ripon; 2, W. Baggay, Marake-by-the-Sea. Cow in calf or milk, 1, T. H. Hutchinson, Catterick; 2, J. Richardson, Great Ayton. Heifers in calf or milk, 1, T. H. Hutchinson, Catterick; 2, Messrs. Duvonor, Bedale. Grazing bullocks under three years, 1, T. Wilson, Guisborough; 2, W. Wood, Marake. Grazing heifers under three years, R. Colling, Marake-by-the-Sea; 2, J. Richardson, Great Ayton. **DISTRICT CLASSES**.—Bulls not exceeding two years, 1, M. Reddale, Danby; 2, J. Nightingale, Guisborough. Shorthorned cows, in calf or milk, 1, M. Reddale, Danby; 2, J. Nicholson, Northallerton. Shorthorned two-year-old heifers, in calf or milk, J. Sinton. Cows for dairy purposes, in calf or milk, 1, A. B. Murray, Redcar; 2, J. Marwood, Redcar. Extra stock, T. Blithewick, Redcar.

SHEEP.—**LEICESTERS AND LONG-WOOLLED**.—Shearing rams, 1 and 2, B. Peirson, Northallerton. Two-shear and upwards, 1 and 2, B. Peirson. Five breeding ewes, B. Peirson; 2, J. Law, Stokesley. Five shearing rimmers, 1, J. Law; 2, B. Peirson. Five gimmer lambs, 1, J. Law; 2, G. D. Trotter, Upleatham. Two tup lambs, 1, J. Proud, Redcar; 2, J. Law. **BLACKFACED MOUNTAIN**.—Tups, 1 and 2, W. Reddale, Yarm. Five breeding ewes, 1 and 2, W. Reddale. **ANY BREED**.—Five fat sheep, 1, J. Heggill, Danby End.

PIGS.—**DISTRICT CLASSES**.—Boar under two years old, of large breed, 1, W. Reddale; 2, J. Bayles, Yarm. Boar under two years old, of small breed, 1, G. Potts, Great Ayton. Sow of any age, large breed, in pig or milk, 1, W. Howe, Marake-by-the-Sea. Sow of any age, small breed, in pig or milk, 1, P. Sturdy, Ormesby; 2, J. Proud. Boar under two years, old, black or Berkshire, 1, J. Nightingale, Guisborough. Sow of any age, black, Berkshire, or any other, 1, G. Wren, Redcar; 2, J. Lynes, Redcar. Two store pigs of any breed, and of the same litter, not exceeding twelve months old, 1, J. Potts, Stokesley; 2, J. Marwood, Redcar. Litter of pigs under eight weeks of age, 1, A. B. Murray, Redcar; 2, J. Porritt, Guisborough. Fat pigs, the property of labourers, tradesmen, or mechanics, 1, R. Fidler, Stokesley; 2, J. M'Neil, Marake.

HORSES (open to all parts of the United Kingdom).—**Cleveland bays**.—Brood mares stunted to a Cleveland horse, 1, F. St. Luthorpe, Whitby; 2, R. J. Sayer, Great Ayton. Colts or fillies R. J. Sayer, Great Ayton; 2, M. Young, Skelton. Yearling fillies 1, J. Welford, Saltburn-by-the-Sea; 2, G. Lancaster, Northallerton.—**Coaching horses**.—Brood mares, stunted in milk, 1, J. Kirby, Stamford Bridge; 2, D. Dale, Darlington. Foals, J. Clark, Ormesby; 2, J. Porritt, Guisborough. Yearling geldings or fillies, 1, T. Wilson, Guisborough; 2, J. Gill, Northallerton. Two years old geldings or fillies, 1, J. T. Potter, Kirby Moorside; 2, J. Knaggs, Guisborough. Three years old geldings or fillies, 1, H. R. W. Hart, York; 2, J. Allison, Upleatham. Carriage gelding, 2, 3, or 4 years old, T. Flintoff, Stockton. Single harness geldings or mares to be driven on the show ground in suitable two-wheeled conveyances, 1, J. W. Pease, M.P., Guisborough. **Ponies**.—Mare or gelding, under 8 years, from 13 to 14 hands 3 inches high, 1, J. T. Wharton, Marake-by-the-Sea; 2, J. W. Pease, M.P., Hatton Hall, Guisborough. Mare or gelding under 8 years of age, not to exceed 13 hands high, 1, J. W. Pease, Guisborough; 2, J. W. Pease, M.P., Guisborough. **Hunters**.—Brood mare, stunted or in milk, 1, J. P. Adamson, Marake-by-the-Sea; 2, J. T. Robinson, Thirsk. Colt foal, 1, E. Turner, Marake-by-the-Sea; 2, B. Dawson, Yarm. Filly foal, 1, W. Harrison, North Ormesby; 2, J. P. Adamson, Marake-by-the-Sea. **Special Prizes**.—Colt foal got by "Merry Sunshine," 1, E. Turner, Marake-by-the-Sea; 2, Mrs. E. Robinson, Yarm. Filly foal got by "Merry Sunshine," 1, W. Harrison, North Ormesby; 2, M. Hall, Brotherton. Yearling gelding, 1, J. and J. Blackburn, Northallerton; 2, J. Rutherford, Redcar. Yearling fillies, 1, A. Savers, Bedale; 2, J. E. Moon, Stokesley. Two year old geldings, 1, G. Lea-

master, Northallerton; 2, J. J. Scurr, Northallerton. Two year old fillies, 1, M. Raw, Darlington; 2, D. Dale, Darlington. Three year old geldings, 1, W. Scott, Boroughbridge; 2, G. Lancaster. Three year old fillies, 1, R. Emerson, Darlington; 2, G. D. Trotter, Upleatham. Four year old hunting gelding, by a thoroughbred horse, 1, a silver cup, C. W. Newcomen, Redcar; 2, J. Walburn, Scarborough. Four year old hunting mare by a thoroughbred horse, 1, J. Akenhead, York; 2, R. Kirby, Northallerton. Five year old and upwards hunting geldings or mares by a thoroughbred horse, 1, J. B. Booth, Catterick; 2, D. Batty, York. Two year old and upwards hunting geldings or mares, by a thoroughbred horse, 1, T. H. Hutchinson, Glengyle; 2, W. Stephenson. CLEVELAND HUNT CUP.—Hunting gelding or mare of any age, by a thoroughbred horse, 1, silver cup, J. P. Petch, Ræwarp, and won a further prize of £5; 2, A. W. Watson, Sainsby, Stockton. LEAPING PRIZE.—For horses any age, sex, or breed, 1, R. Weighell, Middlesborough; 2, J. P. Petch, Shelton. Agricultural Horses.—Brood mares, stunted or in milk, 1, R. Watson, Stockton; 2, T. Potts, Northallerton. Colt foals, 1, W. Nellist, Stokesley; 2, G. Sayer, Guisborough. Filly foals, 1, P. Wallis, West Coatham; 2, J. T. Wharton, Maresby-by-the-Sea. Yearling, 1, G. Crooks, Northallerton; 2, R. Colling, Maresby-by-the-Sea. Yearling fillies, 1, R. Peirson, Carlton; 2, W. Nellist, Stokesley. Two-year-old geldings, 1, R. Colling; 2, J. Borough, Stockton-on-Tees. Two-year-old fillies, 1, W. Love, Walsingham, Darlington; 2, R. Robinson, Guisborough. Three-year-old fillies, 1, W. Love, Walsingham; 2, J. Clapham, Northallerton. Geldings or mares, any age, best adapted for ironworks or trolley purposes, 1 and 2, Pease and Partners, Upleatham, Maresby. Pairs of young draught horses, mares or geldings, either two or three years old, the *bona fide* property of one or two persons resident within the district, 1, J. Peirson, Great Ayton; 2, W. Nellist, Stokesley. Extra stock, J. Peirson. Roadsters, brood mares stunted or in milk, 1, W. Norton, Appleton, Catterick; 2, W. F. Piter, South Preston, North Shields. Foals, 1, Messrs. Stillborn, Darlington; 2, B. Barnside, Darlington. Yearlings geldings or fillies, 1, A. H. T. Newcomen, Redcar. Two-year-old geldings or fillies, 1, T. and G. Knowles, Yarm; 2, J. Nightingale, Guisborough. Three-year-old geldings or fillies, 1, L. Dale, Northallerton; 2, J. and J. Blackburn, Northallerton. Roadster, gelding, or mare, not more than 15 hands *Sin. high*, and not less than four, but under eight years of age, qualified to carry 15 stones weight on the roads, 1, C. Rose, Norton, Malton; 2, A. B. Murray, Redcar. Ladies' hackneys, geldings, or mares, not to exceed 15 hands *Sin. high*, and not less than four, but under eight years of age, 1, C. Middleton, Merton; 2, J. W. Clarke, Guisborough.—Abridged from the *Leeds Mercury*.

CHORLEY.

The Chorley Agricultural Society held their second annual Show on August 22, in a field adjoining St. Thomas's-road, Chorley. The exhibition unfortunately resulted in a considerable pecuniary loss to the Society, as a heavy and almost incessant downfall of rain, which began about half-past eleven and continued till about four o'clock in the afternoon, caused the public attendance to be very small. The Show, in fact, began to break up soon after one o'clock, the Secretary (Mr. James Waring) giving permission for the removal of the exhibits. In itself, however, the Show was superior to its predecessors, both as regarded extent and quality. There were 822 entries. Implements numbered 138; roots 40; horned cattle 89; pigs 44; sheep 39; horses and turn-outs 180; dairy produce 18; dogs 140; poultry 110; and pigeons 14. Perhaps the most notable feature of the Show was the stallion horses, which attracted considerable admiration. Horned cattle also formed an extremely praiseworthy department; and the sheep, pigs, dogs, and poultry were not below the average of similar collections elsewhere. The value of the prizes was nearly £300, or about £30 more than last year.

Among exhibitors of horned cattle first prizes were won in the gentleman's class, which was open for general competition, by Mr. Benjamin Bee, Goosnargh, for the best Shorthorn bull, aged more than two years; Mr. John Harrison, Much Hoole, for the best animal among cows in calf or milk; Mr. D. Harrison, Tarleton, for the best two-year-old heifer; and Mr. J. Nelson, Higher Brookholes, for the best heifer under two years of age. In the farmers' class, which was

restricted to the Chorley district, first prizes were awarded to Mr. J. Roodcroft, Eccleston, for a Shorthorn bull, more than two years; Messrs J. and H. Biding, Coppall, for a Shorthorn bull; between one and two years of age; Mr. J. Harrison, Much Hoole, for a bull calf, also for a sow, and again for two cows; Mr. D. Harrison, Tarleton, for a two-year-old heifer; Mr. J. Harrison, for a one-year-heifer, and also for a heifer calf.

First prizes for pigs, the competition being confined to the district, were won by Mr. J. Crose, Leyland, with a boar of large breed; Mr. P. Ashcroft, Rufford, with a boar of middle breed; Mr. D. Harrison, Tarleton, with a sow of the middle breed; Mr. T. J. Hare, Chorley, with a sow of the small breed; Mr. E. Mawdaley, Wigan, Lane, with a sow and farrow of pigs; Mr. R. Wilson Thom, Duxbury, with a store pig; and Mr. C. Walls, Chorley, with a cottager's pig.

The winners of first prizes for sheep, the department being open for general competition, were Mr. C. Mercer, Preston whose successful exhibits was a ram of the long-wool breed; Mr. T. Hare, Chorley, who showed the best ram of the short-wool breed; Mr. W. Harrison, jun., Chorley who showed the best three ewes or the short-wool breed; Mr. R. Moulding, Leyland, who exhibited the best three long-wool ewes which had produced lambs this year; and Mr. C. Mercer, Preston who showed the best pen of lambs.

The following exhibitors obtained first prizes for horses in the classes in which there were no restrictions as regarded the district for which competitors were accepted: Messrs. P. Fort and Sons, Keighley, for a thoroughbred stallion; Mr. J. Gill, Silsden, Leeds, for a roadster stallion; Mr. Geo. Worsley, Lower Darwen, for the best animal among stallions for draught or agricultural purposes; Mr. J. Sutton, Rufford, for a stallion, aged between two and three years, for draught or agricultural purposes; the executors of Mr. James Holt, Chorley, for a pair of horses for draught or agricultural purposes; Mr. B. Bee, Goosnargh, for a three-year-old gelding for road or harness, and also for a two-year-old filly for road or harness; Mr. E. Topping, Much Hoole, for a yearling for road or harness; Mr. B. Bee, for a foal for road or harness; Mr. W. J. Larwick Watkin, Pemberton, for a roadster mare; not less than 15 hands; Mr. T. Wild, Rice, jun., Charnock, Richard, for a cob under 15 hands in height; Mr. J. Carr, Leyland, for a pony not more than 13 hands high; Mr. J. R. Richards, Preston, for the best hunter—the competing animals being tested at jumping over hurdles and water; Mr. J. Coombs, Northwich, for the best fence; Mr. E. Hayworth, Blackburn, for the neatest, cleanest, and best turn-out, the horses being over 14 hands in height; Mr. J. Carr, Leyland, for a turn-out, including a cob not more than fourteen hands high; and Mr. G. Whittle, Fulwood, for the best tandem turn-out, the management of it by its driver being taken into consideration by the Judges. Exhibitors of horses belonging to the Chorley district gained first prizes as follows: Pair of horses for draught or agricultural purposes, Mr. G. Orrell, Wrightington; brood mare for agricultural purposes, Mr. T. Grimshaw, Ulmsa Walton; mare or gelding, not less than four years old, for agricultural work, Mr. E. Hunt, Much Hoole; mare or gelding, three years old, for draught or agricultural work, Mr. J. Tuson, Croston; filly or gelding, two years old, for draught or agricultural work, Mr. C. H. Dickinson, Croston; yearly filly or gelding, for draught or agricultural purposes, Mr. J. Haydock, Heskin; foal for draught or agricultural work, Mr. J. Eddleston, Lower Darwen.—*Manchester Examiner*.

INVERNESS.

The annual show of the Inverness Farmers' Society was held in Bell's Park, Inverness, on August 17th. There was an unusually good turn-out. Shorthorns were the best section at the show. The first prize aged bull from Wester Lovat was Royal Eden, a heavy roan bred by Mr. Dent, Kaber Fold. The second prize animal was Victor Royal, a son of Baron Killerby. In the yearling class Mr. Baillie, of Dochfour, was first with Oliver Cromwell, second at Edinburgh; the second prize animal from Rosehangh, Ballimore 2nd, after Royal Hope at Gordon Castle, and out of Mysie. The third prize bull was first at Nairn. Of the thirteen cows shown, nine came from Dochfour, these being chiefly of the Stittym Mint and

REVIEW OF THE CORN TRADE,

FROM THE MARK LANE EXPRESS FOR THE WEEK ENDING AUGUST 27.

The weather has been very unsettled during the past week throughout the United Kingdom, and farmers have been considerably delayed in stacking and thrashing wheat, although cutting has been carried on without much interruption. Sunshine is now wanted to harden the grain and check the tendency to sprouting, which is always to be feared when the ingathering of the crops takes place under a warm damp atmosphere. The thunderstorms in the Midland Counties referred to last week did a good deal of damage, but it is considered that the yield of wheat on the Fen lands, will not turn out far short of an average. Reports are variable as to barley and oats, but the crops have much improved, and with a fair spell of dry weather they should be ready for the reaping machine next week. In Scotland cereals have been making unusually slow progress towards maturity under the retarding influence of wet-unseasonable weather, but appearances indicate a fair yield of grain, although of an inferior quality, while there also appears good promise of abundant straw. The root crops have benefited by the rain, and turnips and mangels promise well, but complaints of the potato disease unfortunately appear to be on the increase. The publication of the agricultural Returns shows the area planted with wheat this year to have been about 2,168,000 acres. This is about 172,500 acres in excess of last year, but about the same quantity less than was sown in 1875. It also appears from the Returns that, when compared with last year, barley and oats have been sown upon a slightly diminished area. The prosecution of harvest work has so entirely engaged farmers lately that there has been very little business passing in the country markets, but where sales have been made prices indicate a fall of 1s. to 2s. per qr. on wheat since last Monday. The few lots of new wheat shown in the provincial Exchanges have been in poor condition, and scarcely fit for present use; but the condition of the majority of the samples offered at Mark Lane on Monday last was tolerably good, and sales were made at 64s. for white, and 61s. for red descriptions. Although no great activity is ever to be looked for in the grain trade during harvest time, the depression has been greater than usual during the past week, owing to the enormous arrivals of foreign wheat and oats. Supplies have now been upon a large scale for some weeks past, and the return on Monday last gave over 92,000 qrs. while the subsequent arrivals up to Friday have amounted to 55,120 qrs. Prices have necessarily given way in face of such heavy supplies, and a decline of 2s. to 8s. per qr. was quoted last Monday on wheat, and fully 1s. per qr. on oats. Other articles remain without much variation, but the trade generally has been overweighed by the supplies which have been pouring in upon us at such a rate that the resources of the various dock companies have been taxed to the uttermost to discharge the vessels, and merchants have been seriously inconvenienced by the difficulty in obtaining granary room for their corn. Evidently there are two conflicting forces in operation in the trade at the present time, and it is difficult to foresee which may prove the stronger. On the one hand America, Russia, and Hungary, all important sources of supply, have been favoured with abundant crops; whilst on the other, the deficient harvests in France and England, the blockade of the Southern Russian ports, and the uncertainty of politics are facts which cannot be despised, and which may during the winter months assume a

potential force greater than at present. The sales of English wheat noted last week were 24,436 qrs., at 64s. 9d., against 21,298 qrs., at 45s. 8d. in the previous year. The London averages were 63s. 7d. on 1,048 qrs. The imports into the kingdom for the week ending August 18th were 1,322,647 cwt. wheat, and 104,615 cwt. flour. Business at Mark Lane opened very quietly at market on Monday last, owing to the continued large arrivals of grain from abroad, and the depression consequent on fine weather. Some special interest, however, was attached to the trade, as the first sales of any consequence were made of new English wheat, of which there was a moderate supply offering, the grain being mostly in fair condition. The week's arrivals only amounted to 1,169 qrs., and little or nothing was done in old wheat. The ruling prices for the new crop were 64s. to 66s. for white, and 60s. to 62s. for red descriptions, but rather higher rates were obtained for some extra fine white sorts for seed. The imports of foreign were exceedingly heavy, amounting in all to nearly 93,000 qrs., more than one-third of which quantity was from Persia and the East Indies. The arrivals from North Russia were 24,671 qrs., and those from New Zealand 7,863 qrs., but America was not represented in the Return. There was a good attendance of millers, who bought sparingly at an all-round decline of 2s. per qr. on the previous Monday's currencies, but where sales of Russian sorts were pressed ex-ship, sellers had to accept an even greater reduction. The week's exports were 5,441 qrs. The supply of barley consisted of 92 qrs. of home-grown, and 1,801 qrs. of foreign. Sales progressed slowly, but the full prices of the previous week were maintained, owing to scarcity. There were only 1,034 qrs. of maize reported, and prices did not undergo any quotable variation. The arrivals of foreign oats were unusually heavy, in all 121,610 qrs., and under pressure of these, which were forced off ex-ship, owing to the difficulty in obtaining granary room, a decline of fully 1s. per qr. took place. On Wednesday the return gave 160 qrs. of English wheat, and 50,160 qrs. of foreign. The trade was exceedingly dull until nearly the close of the market, when a more active demand was experienced, and a fair amount of business was done at Monday's currencies. On Friday there were 450 qrs. of home-grown wheat, and 25,120 qrs. of foreign. Wheat sold slowly at Wednesday's prices, but the inquiry was quite of a retail nature. Maize was decidedly firmer, and 6d. per qr. more money was obtainable. The imports of flour into the United Kingdom for the week ending August 18th were 104,615 cwt., against 117,458 cwt. in the previous week. The receipts were 10,814 sacks of English, and 1,324 sacks of foreign, but no barrels were reported. The trade has been slow, and both sacks and barrels have declined fully 1s. on the week. The week's imports of beans were 92,008 cwt., and of peas 7,680 cwt., showing a decrease of 78,160 cwt. on the former, and 25,719 cwt. on the latter. Both articles have ruled steady, and a fair amount of business has been done at unaltered quotations. The deliveries of malt were 17,654 qrs., and the exports 1,315 qrs. Prices have undergone no change since last week, but a brisker inquiry has been met, and sales have been made to a fair extent for the time of year. A steady trade has been done in agricultural seeds required for sowing purposes, and the state of quietude into which this branch of business relapses during the summer may be

shortly expected to give way to increased activity. Younging parcels still command very full prices. Fine samples of new rape have realised an advance of 8s. to 4s. per qr. on the week, as the yield of this crop turns out everywhere unsatisfactory. Hempseed has also slightly improved in value, and canary, although not quotably dearer, has been more inquired for. Provincial trade has ruled quiet throughout the past week, and wheat has declined 1s. to 2s. per qr. in most of the country markets. At Liverpool, on Tuesday, white wheat was in fair request at an advance of 1d. to 2d. per cwt. on the previous Friday's prices, but the improvement was subsequently lost. A somewhat improved inquiry has also been experienced in flour, but feeding stuffs have undergone no quotable change. The week's imports were about 76,000 qrs. of wheat, and about 84,000 qrs. of maize. At Newcastle the trade has been dull, both for English and foreign wheat, at a decline of 1s. per qr., in spite of broken weather. Barley has realised rather higher rates, but other articles remain unaltered. At Peterborough, Wisbech, and most of the inland markets, business has been almost nominal, as farmers have been too busy harvesting to attend the markets. At Edinburgh the market has been fairly supplied with grain from the farmers, and a slow sale has been experienced for wheat at a decline of 1s. per qr., while flour was also quoted 1s. per sack cheaper. At Leith the weather has been windy and very wet, and the cereal crops have been much broken and laid by the heavy rain. In spite of the unsettled weather the grain trade has been very inanimate, but holders of wheat have not pressed sales, preferring to warehouse their grain rather than accept a further reduction. At Wednesday's market Scotch wheat could only be moved at a decline of 1s. per qr., while foreign was nominally unaltered, but with very little business passing. Barley and oats were in fair request at fully last week's prices for fine qualities, and flour ruled quiet at former rates. At Glasgow, on Wednesday, the market was fairly attended, and the wheat trade ruled quiet, but the tone was rather stronger towards the close. There was a moderate inquiry for flour, and barley and oats were both the same dearer. At Cork the weather has been unsettled, and heavy rain has fallen at times, which has delayed harvest operations. There has been very little business passing in wheat, and millers have been enabled to supply their wants at 1s. per qr. less money. Maize has ruled dull, and prices have declined 6d. per qr., but oats remain as last quoted. At Belfast the weather has been generally speaking, fine, and a moderate consumptive demand has been experienced for wheat and maize at barely late rates.

The reports from Mark Lane for the past four weeks are as follows:—

Monday, Aug. 6.—The arrivals during the past week have been: English wheat 480 qrs.; foreign 57,290 qrs. English wheat, of which the offerings were exceedingly light, sold slowly at about Monday's prices, but towards the close of the market millers showed more disposition to purchase foreign, and previous values were maintained. Country flour, 1,880 sacks; foreign 580 brls. The trade ruled slow for both sacks and barrels at about former currencies. English barley, 540 qrs.; foreign, 2,050 qrs. Quiet but steady at Monday's advance. Malt: A slow sale at late rates. Maize, 11,050 qrs. In limited request at barely Monday's prices. Oats: foreign 74,240 qrs. With continued heavy arrivals from abroad previous values were with difficulty maintained. Beans unsifted in value or demand. Linseed: Very little doing and quotations unchanged.

Monday, August 13.—The arrivals during the past week have been: English wheat, 1,861 qrs.; foreign,

64,877 qrs. Exports, 2,811 qrs. The supply of English wheat fresh up to market this morning was again very small, and sales progressed slowly at about late rates. Of foreign the arrivals were liberal, and a quiet consumptive demand was experienced, at a decline of 1s. per qr. on the fortnight. Country flour, 11,970 sacks; foreign, 8,961 sacks and 7,261 brls. A limited sale for both sacks and barrels, at former currencies. English barley, 227 qrs.; foreign, 8,336 qrs. The trade was firm, but quiet, without quotable alteration. Malt, English, 17,418 qrs.; Scotch, 235 qrs. Exports, 1,604 qrs. A moderate amount of business passing at about previous prices. Maize, 12,428 qrs. In steady request, and fully as dear. English oats, 846 qrs.; foreign, 65,961 qrs. A slow sale at a decline of 6d. to 1s. per qr. on the fortnight. English beans, 778 qrs.; foreign, 1 qr. A quiet demand, at about late rates. Linseed, 10,717 qrs. Exports, 240 qrs. Unchanged.

Monday, August 20.—The arrivals during the past week have been: English wheat, 1,169 qrs.; foreign, 92,908 qrs. Exports, 5441 qrs. There was a small supply of English wheat of this year's growth at market this morning, which sold slowly at about 65s. for white, and 62s. for red; of foreign the arrivals were exceedingly heavy, and with a large attendance of millers and brilliant weather, a quiet consumptive demand was experienced at a decline of 2s. per qr. on the week. Country flour, 10,614 sacks; foreign, 1,824 sacks. A slow sale at a decline of 1s. per sack, and 6d. per barrel. English barley, 92 qrs.; foreign, 1,801 qrs. The trade, although quiet, was steady, and last week's prices were maintained. English malt, 16,554 qrs.; Scotch, 1,300 qrs. Exports, 1,815 qrs. In quiet demand, at former values. Maize, 1,034 qrs. Exports, 231 qrs. There was a moderate inquiry, and previous prices were fairly supported. English oats, 296 qrs.; foreign, 121,610 qrs. Exports, 17 qrs. A dull trade, under pressure of very heavy foreign arrivals. All descriptions were 1s. per qr. cheaper to sell. English beans, 398 qrs.; foreign, 8,469 qrs. Steady at last week's quotations. Linseed, 2,543 qrs. Exports, 910 qrs. Unaltered.

Monday, Aug. 27.—The arrivals during the past week have been: English wheat, 2,526 qrs.; foreign, 74,710 qrs.; exports, 8,462 qrs. There was a limited supply of home-grown wheat at market this morning, including a fair sprinkling of samples of the new crop, and sales progressed slowly at last week's prices. Of foreign the arrivals were again very heavy, and with a fair attendance of millers a quiet consumptive demand was experienced at fully late rates. Country flour, 8,824 sacks; foreign, 1,144 sacks, and 1,917 brls. The trade ruled quiet, but previous quotations were fairly maintained for both sacks and barrels. English barley, 419 qrs.; foreign, 8,869 qrs. A steady trade at last week's prices. Malt: English, 21,466 qrs.; Scotch, 509 qrs. Exports, 2,047 qrs. In fair request at late rates. Maize, 8,812 qrs. Exports, 2,140 qrs. There was a decidedly improved demand at an advance of 6d. per qr. on the week. English oats, 892 qrs.; foreign, 100,825 qrs. Exports, 351 qrs. In spite of heavy imports the depression noticeable towards the close of last week was recovered, and prices remain about the same as they were on Monday last. English beans, 451 qrs.; foreign, 5,243 qrs. Quiet but steady. Linseed, 8,759 qrs. Exports, 400 qrs. Unchanged.

IMPERIAL AVERAGES

For the week ending Aug. 26, 1897.

Wheat	19,133 qrs.	62s. 10d.
Barley	281 qrs.	32s. 9d.
Oats	1,612 qrs.	32s. 6d.

Printed by HAZELL, WATSON, & VINEY, 235, Strand, London.

LONDON AND COUNTY BANKING COMPANY.

Established in 1836, and incorporated in 1874, under "The Companies Act, 1862."

SUBSCRIBED CAPITAL — £3,750,000, in 75,000 Shares of £50 each.

REPORT ADOPTED AT THE HALF YEARLY GENERAL MEETING, 2ND AUGUST, 1877.

FREDERICK FRANCIS, Esq., in the Chair.

The Directors, in presenting to the Proprietors the Balance-Sheet of the Bank for the Half-Year ended the 30th June last, have the satisfaction to report that, after paying interest to Customers and all charges, allowing for Rebate, and making provision for bad and doubtful debts, the Net Profit amount to £133,899 11s. 10d. This sum, added to £11,166 8s. 8d., brought forward from the last account, produces a total of £134,065 0s. 1d.

They have declared an Interim Dividend for the Half-Year at the rate of 1s per cent. per annum, which will absorb £120,000, leaving a balance of £14,065 0s. 1d. to be carried forward to Profit and Loss New Account.

The Dividend, £1 12s. per share, free of Income-Tax, will be payable at the Head Office, or at any of the Branches, on or after Monday, 13th instant.

BALANCE SHEET of the London and County Banking Company, 30th June, 1877.

Dr.	
To capital paid up.....	£1,500,000 0 0
To reserve fund	70,000 0 0
To amount due by the Bank for customers' balances, &c. 22,264,730 1 5	
To liabilities on acceptances, covered by securities.....	2,333,935 2 10
	24,568,665 4 3
To profit and loss balance brought from last account	11,166 8 8
To gross profit for the half-year, after making provision for bad and doubtful debts, viz.....	249,679 0 7
	260,845 8 10
	£27,169,500 13 1

Or.	
By cash on hand at Head Office and Branches, and with Bank of England.....	2,715,001 8 2
By cash placed at call and at notice, covered by securities.....	2,731,937 3 8
Investments, viz.:	5,447,588 21 10
By Government and guaranteed stocks.....	2,523,997 18 9
By Colonial Government and other stocks and securities	279,317 12 6
	3,103,315 11
By discounted bills, and advances to customers in town and country	15,708,008 18 0
By liabilities of customers for drafts accepted by the Bank (as per contra)	2,333,925 2 10
	17,939,931 0 10

By freehold premises in Lombard-street and Nicholas-lane, freehold and leasehold property at the branches, with fixtures and fittings	452,802 19 8
By interest paid to customers	53,296 18 8
By salaries and all other expenses at head-office and branches, including income-tax on profits and salaries	134,615 11 1
	£27,169,500 13 1

PROFIT AND LOSS ACCOUNT.

To interest paid to customers, as above.....	£53,296 18 8
To expenses, as above	134,615 11 1
To rebate on bills not due, carried to new account.....	20,876 18 3
To dividend of 8 per cent. for half-year	120,000 0 8
To balance carried forward	14,065 0 1
	£360,845 8 10
By balance brought forward from last account	11,166 8 8
By gross profit for the half-year, after making provision for bad and doubtful debts.....	249,679 0 7
	£360,845 8 10

We, the undersigned, have examined the foregoing Balance Sheet, and have found the same to be correct.

MUNGO McGEORGE,
WILLIAM NORMAN,
RICHARD H. SWAINE, } Auditors.

London and County Bank, 26th July, 1877.

LONDON AND COUNTY BANKING COMPANY.

NOTICE IS HEREBY GIVEN that a DIVIDEND on the Capital of the Company, at the rate of 8 per cent. for the Half-year ended June 30th, 1877, will be PAYABLE to the Proprietors, either at the Head Office, 21, Lombard-street, or at any of the Company's Branches, on or after Monday, the 13th instant.

By Order of the Board,

W McKEWAN, General Manager.

21, LOMBARD STREET, August 2nd, 1877



The Only Jones.
The property of J. B. Carter, Esq., of the City of New York, and is now in the possession of J. B. Carter, Esq., of the City of New York.

THE FARMER'S MAGAZINE.

OCTOBER, 1877.

PLATE.

THE ONLY JONES,

THE PROPERTY OF LORD FALMOUTH, TREZOTHNAN, PROBUS, CORNWALL.

The Only Jones is a three-year-old Devon bull by Arthur 997, dam Photograph, and was bred by Lord Falmouth. At the Centennial Meeting of the Bath and West of England Agricultural Society, held at Bath this year, he was declared not only the best of Devon bulls but the champion or best bull of any breed in the yard. He was also first in his class at the Royal Agricultural Meeting at Liverpool, where Lord Falmouth also took

first and second prizes with Sirloin and Romany in the Devon bulls above two years old, and a first prize in the yearling bulls. The Only Jones is a lengthy, round, sturdy little fellow, and was likened by an able critic in *The Mark Lane Express* to a German sausage. In fact he is a capital specimen of the Devon, and in every way a credit to the West Country.

THE DUKE OF ARGYLL ON TENANT-RIGHT.

From *The Mark Lane Express*, for September 3rd, 10th, and 17th.

The Duke of Argyll, in his essay on "The Commercial Principles Applicable to Contracts for the Hire of Land," takes exception at the outset to the investigation of the history of land tenure with which some writers upon the Tenant-Right question have thought it desirable to preface their arguments. His Grace remarks:—"It is always possible that the interests of society may require us to modify the existing rights of individuals, and whether such necessity has arisen is the main point of our inquiry." By all means; but surely the Duke does not deny that, in any application for legislative reform, precedent goes a long way with statesmen so Conservative as the English of almost all parties are. If it can be shown that there is nothing unprecedented in the principle of land tenure that it is desired to establish, or rather to revive, the prejudice with which most people regard anything new will be materially diminished in force. However, if the Duke is willing to set precedent entirely aside in the consideration of the question at issue, the advocates of compensation to tenants for their unexhausted improvements will be quite ready to join hands with him. They will be only too glad to let the interests of society be the test-point of the controversy between the Duke and themselves, feeling assured that those interests are quite strong enough to justify the modification of the existing rights of individuals in respect of the letting and holding of land. Similarly we agree with the Duke, when he proceeds still further to disencumber the controversy of unnecessary complications by admitting the uselessness of

inquiries as to the right of the State to restrict individual freedom in such matters as contracts for the hire of land. "I know of no abstract limit," he says, "to the right of the State to do anything;" and he proceeds to illustrate that position by asserting that in the interest of economy the State may pass sumptuary laws, or regulate the wages of farm labourers, or "require that no tenant should take land unless he could show that he possessed a certain minimum of capital per acre," or "enact that no man shall hire land who could not pass an examination in scientific agriculture." It is not the right of the State to do such things, which is in question, he urges, but the expediency. Here, again, we are willing to meet the Duke on his own ground, and we pass on, therefore, to consider how he uses his premisses. He proceeds to show that it was not found to be conducive to the common good for Parliament to pass sumptuary laws, to regulate wages, or to select tenants, although some attempts of the kind were made in past times. "The great principle which lies at the root of their condemnation and abandonment," he says, "is simply this—that individual men are always in the long-run the best judges of their pecuniary or economical interests, and that the interests of the public, or of the State, are best served, on the whole, when men are allowed in all such matters to pursue freely their own instincts and desires." No doubt, in the instances cited; but we shall presently have something to say of the application of this theory to other cases. These instances

are analogous to State interference with the valuation of rents, which no English advocate of Tenant-Right proposes. That they do not run on all fours with these restrictions of the landlord's appropriation of his tenant's goods, a merely cursory examination is sufficient to show. The dictation by the State of the kind of apparel which the members of a particular class shall wear, and of the articles of diet which they shall subsist upon, is an indefensible interference with individual liberty which is obviously as distinct in principle as anything can be from a law giving a tenant an indefeasible right to claim payment for his unexhausted improvements. Similarly, the regulation of labourers' wages by Act of Parliament would be an interference with the law of supply and demand which would, indeed, be akin to the regulation of rents by State authority, but which has nothing in common with a law giving such security to a tenant's property as he is powerless to obtain by contract. The supposed provision for ensuring that the holder of land has sufficient knowledge and capital to do justice to it as the principal source of the national food supply does not, perhaps, differ in principle from a law overriding farm contracts in order to promote the application of capital to farming; but it would be a much more extreme application of the principle, and it would apply to the landowner as well as to the tenant. It would, further, involve a troublesome and vexatious inquisition into a man's private concerns which would not follow in what the Duke considers to be a parallel case. On the whole, the Duke is welcome to our admission of partial similitude, and if he can show as good reason for, with as few objections to, this form of Parliamentary interference as we can show in our plea for compulsory Tenant-Right, we shall be willing to consider any definite proposal which he makes, provided that it embraces landlords and tenants alike in its provisions.

In considering whether there are any exceptional circumstances connected with contracts for the hire of land which render State interference desirable, the Duke denies that the parties to the bargain in such cases are in more unequal positions than people are in many other matters of business, when one person desires the use or the purchase of what another possesses; and he proceeds to argue that whenever the State has interfered in such cases it has been in the interest of health or morality. Hence, he contends, "it is impossible to deny that a strong presumption arises against any and every attempt to limit individual freedom in matters purely economic." Here we have, then, one of the very same appeals to historic precedent which the Duke at the commencement of his essay deprecated. His Grace may support his negative argument by attempting to show from history that interference of the kind desired by the advocate of legislative Tenant-Right, has a strong presumption against it; but his opponents may not urge other historic precedents as a presumption in their favour. Surely, this is hardly fair. Nor is this true:—"The grounds on which special legislation is recommended in this business have no reference

to the health of those who hire land, nor to the preservation of their morals, but have reference exclusively to their success in business." Now, it might appear somewhat far-fetched to urge against this, that the health of widows and orphans is often affected by the appropriation of a deceased tenant's investments by his landlord. As to the morality, it is the landlords', and not the tenants', morals that a just law would tend to improve, by teaching them that it is their duty to pay for value received. But what we most strongly protest against in this last-quoted passage is the assertion that the grounds of proposed legislation have reference exclusively to the tenants' success in business. Nothing could be more misleading than this statement. The claim for compulsory Tenant-Right rests, not on a desire to bolster up artificially a tenant's success in business, but, first on the ground of the public welfare, and, second, on that of individual justice. Nor can we be very grateful for a notable admission which is made in the next paragraph, seeing that it is followed by another objectionable assumption. It is fair of the Duke to make this admission:—"Nevertheless, the conditions of human society are so infinitely complex that in the science of politics—if there be such a science—it is perhaps not possible to deny positively, upon abstract principles, the wisdom of a proposal even such as this." But it was not fair to add:—"Enough if we begin our inquiry with a very clear perception that the burden of proof lies very heavily upon those who recommend a course so peculiar and exceptional;" for here we have the same dwelling on precedents favourable to his own argument, while he denies the validity of his opponents' precedents, which we have before complained of.

We do not care to follow the Duke in his protests against the use of the word "monopoly" as applied to the ownership of land. To all effects and purposes that ownership, as far as it relates to the hire of land, is a modified monopoly, inasmuch as nearly all the land let out in farms is in the hands of a limited and homogeneous class, and a class strong in its adhesion to semi-feudal privileges and customs. But just now the force of that modified monopoly is broken, temporarily at least, by the disastrous crisis in farming which we unhappily witness throughout the length and breadth of the country.

The attempt to draw a parallel between the owners of land, a comparatively compact and seldom changing body, artificially preserved by entail and primogeniture, and the hirers of farms, a constantly-changing body, free for anyone to enter without artificial restriction of any kind, seems to us to be scarcely deserving of serious confutation. Whether landlords are monopolists or not, there is not the slightest pretext for applying the term to tenants, especially in the Duke of Argyll's own country, where farms are commonly let by tender. In the sense in which we have above declared that the ownership of land in this country is a modified monopoly, the tenancy of land certainly is not, as there is no more heterogeneous class than that of the tenant-farmers, who are always ready to compete with each other to a most disastrous

extent wherever farming affords a bare livelihood. What the Duke means by arguing against any limitation of this competition we are quite at a loss to imagine, since we are not aware that anything of the kind has been proposed in England or Scotland. That Irish tenants would be to all effects and purposes monopolists, in the sense in which landowners may be so termed, if they obtained what they ask for—the right to sell their goodwill and improvements to the highest bidder, whilst their rents would be valued, instead of being left to be governed by open competition—it must be admitted; but the English and Scotch advocates of Tenant-Right ask for nothing in the slightest degree akin to this Irish demand. We conclude, then, that the Duke's attempt to prove that "in the only sense in which owners can be called monopolists, farmers are monopolists also," is most distinctly a failure.

In proceeding to examine all the claims for compulsory compensation for unexhausted improvements, the Duke states that there are in reality two different lines of argument to be considered. We do not acknowledge the distinction as the Duke puts it. Broadly speaking, there are only two parties of Tenant-Right advocates—those who are in favour of permissive legislation, and those who advocate a compulsory measure. To show that the Duke's distinction is not correctly drawn, we must quote at some length from his essay. "One line of argument," he says, "is this:—That in many parts of the country the farmers of land on hire, holding from year to year, are, owing to the shortness and uncertainty of this tenure, liable to a special risk in respect to capital laid out upon improvements of the soil—the risk, namely, of having their enterprise put an end to by unexpected removal before they have had time to recoup themselves, with the usual rate of profit or of interest, out of the proceeds of that improvement. It is contended that this is an evil which does as a matter of fact discourage and diminish the amount of capital laid out upon improvements, and that this is an evil requiring a legislative remedy. The end in view is that farmers should be exempted from this special risk by some provision that in the event of their enterprise being thus interrupted they should have so much of their outlay repaid to them as they have not had time allowed them to recover, with interest out of the proceeds of the improvements they may have made. This is the aim and object of the Lincolnshire Custom; this is the aim and object of many other local customs; this is the aim of still more numerous private contracts; this is the aim of all those who recommend compulsory legislation modelled with more or less change of detail on the Lincolnshire Custom, or on private agreements to the like effect." Against this aim and object the Duke of Argyll makes the important admission that he has nothing whatever to say, because he agrees that it is an end in itself desirable. But he has much to say, first, as to the conditions under which, and the extent to which, the evil really exists; and, secondly, as to the inefficiency and inexpediency of the

remedy proposed. "The other line of argument," the Duke continues, "is this:—That it is a public misfortune that farmers of skill and capital should be found willing to embark that capital in improvements of the soil for the mere return of that capital with ordinary interest or profit; that there is a kind of security for capital, and an amount of return upon it, which, as a matter of right and justice, ought to be guaranteed to farmers over and above those which (unfortunately, it is said) excellent farmers are found willing to accept; that far more than they are found willing to accept is due to them, and that as this excess of profit cannot be secured to them in the market, owing to the willingness of innumerable farmers to be content with less, the State must secure it to them by compulsory regulations. In short, an abstract idea of justice dictates some scale of returns which are due to the business of farming; and farmers themselves must be forbidden to accept any terms less favourable, however much they may desire it."

We have here a most unnecessary and unwarrantable complication of a simple claim. We do not know of any advocates of compulsory compensation to tenants who ask merely for the repayment of "so much of their outlay as they have not had time allowed them to recover with interest out of the improvements they have made." Still more do we object to the description of the second class of claimants, when they are represented as regarding it as a public misfortune "that farmers of skill and capital should be found willing to embark that capital in improvement of the soil for the mere return of that capital with ordinary interest or profit." Those who ask for a compulsory law, all ask, as far as we are aware, simply for payment for value received by the landlord, independently of any profit or loss which the tenant may have received or incurred by his investments. We have never seen it stated that it is a public misfortune that farmers of skill and capital should be found willing to invest at the ordinary risk. It is a private misfortune that farmers should so often risk and lose their capital by investing it without real security; but the public misfortune is inherent to the fact that farmers, as a rule, do not risk their capital in anything beyond what is termed "hand-to-mouth" farming, for the sufficient reason that it is not safe for them to do so. We know nothing of any "abstract idea of justice" which "dictates some scale of returns which are not due to the business of farming." We only know compensation for the value of unexhausted improvements, whatever that value may be, and whether the investor has profited or lost by his investments. The claim we, in common with all logical advocates of Tenant-Right urge is, not that any peculiar advantage should be conferred on the tenant, but that he should have an indefeasible right to be repaid whatever amount he has added to the property of his landlord. This is nothing more nor less than payment for value received, and there is surely nothing unreasonable or exceptional in that. For the

sake of convenience it has been assumed that improvements of various kinds are exhausted in different terms of years, beyond which no claim for compensation should be valid. In this arrangement all advocates of Tenant-Right concur; or, if there are any exceptions, it is not worth while to consider them in proposing a general scheme of legislative settlement. The convenience of having such terms is obvious, and the chief points of difference have been as to their respective duration. Within these terms it has been urged that valuers should be free to exercise their judgment as to the amount of the unexhausted value of improvements carried out by tenants. The question whether the tenant has profited by his investment or not does not come into the account. All that he can fairly ask the landlord to pay him is the amount which the landlord has, according to the estimate of skilled valuers, received. The Duke of Argyll appears to ignore this only fair principle of compensation to tenants from landlords, and he complicates his argumentation by a large number of immaterial computations. To be fair, he should argue, either that the tenant should be paid "a fair profit with interest" on his investments, whether wisely or foolishly made; or, that the tenant should be paid the value to the landlord of those investments, whether that value be great or small. He adopts neither alternative, but only proposes to allow the tenant reasonable time for barely recouping himself for successful investments, whilst the unsuccessful ones are to be unrecompensed. Thus the tenant is to take always all the risk, but not always all the profit. We would allow the tenant to take all the risk; but, as he would bear the whole loss of unprofitable expenditure, we would secure to him the whole profit of successful outlay.

We may with advantage break off here in our examination of the essay which we have before us, because so far the Duke has dealt with his own abstract of the Tenant-Right arguments—an abstract which, as we have seen, is open to very strong objections. His Grace next proceeds to deal with Mr. W. E. Bear's essay on "The Relations of Landlord and Tenant in England and Scotland," and on this portion of this treatise we shall have something to say next week.

The Duke of Argyll commences his criticism of "The Relations of Landlord and Tenant" thus:—"The abstract doctrine of equity which is set up on behalf of farming can be gathered very clearly from Mr. Bear's essay. It is this:—That when a man hires land belonging to another, and when by drainage or other outlays upon it he gets out of the qualities of the soil a largely increased return, no part of that increase is ever to be shared by the owner of the soil, but the whole of it is to belong exclusively to the tenant, and this not for a time only, till his outlay has been repaid with interest, but for ever, or until the owner has bought back his own land at what is called 'its full value.' This expression of 'full value' is specially defined to

mean the full value 'to the owner,' whenever he may come into possession, at the termination of the tenancy." The expression, "until the owner has bought back his own land" in the above passage sufficiently shows its incorrectness as an interpretation of the doctrine laid down in Mr. Bear's essay, in which the owner's land and the tenant's improvements are throughout kept carefully distinct. In that essay it is plainly stated that an improvement is something super-added to the land, and to be valued as such, and not as a part of, or in the same manner as the estate itself. The landlord is not asked to buy back his own land, but only to buy the increment of value conferred upon it solely by the enterprise and expenditure of the tenant. But let us follow the Duke a little further in his fallacious statement of his opponent's doctrine. To illustrate it he supposes the very extreme case of land being made by draining worth fifty shillings an acre annually more than it was worth in its undrained condition, and then assumes that the tenant, who has done the draining, at the cost of £8 an acre, enjoys a large profit from it for fifteen or twenty years, being in that time repaid his outlay with interest "many times over." "Nevertheless," the Duke complains, "the proposition is, that the tenant who has made this outlay on land belonging to another, and has secured from that land such returns, must in justice, at the end of his lease, be paid by the owner the 'full value' of the increased rental of fifty shillings an acre, which at thirty years purchase would be £750." The extreme exaggeration of the whole illustration will raise a smile; but it does not affect the principle at issue. What we have to object to is that the Duke has entirely misconceived that principle. The "proposition" which he criticises is a figment of his own brain, and nothing of the kind has been advanced, as far as we know, by any English advocate of Tenant-Right, certainly not by the author of "The Relations of Landlord and Tenant." The notion of a tenant claiming as the unexhausted value of draining that had been done fifteen years—to take the Duke's shortest term—an amount equivalent to thirty years' purchase of the increased annual value of the land, is simply absurd. The Duke may well complain that if such a demand were yielded to, "the present tenants of agricultural land capable of improvement would acquire an indefeasible right of pre-emption at many fewer years' purchase than it would fetch in the market." But no demand of the kind has been made by the writer whom the Duke is here attempting to refute. The fallacy of the Duke's assumption lies in this—that he supposes improvements to be, like land, everlasting, and consequently worth as many years' purchase. This fallacy—a most extraordinary one for a landowner of long and wide experience to have fallen into—pervades the whole of the Duke's argument in reply to Mr. Bear, and, therefore, to a great extent invalidates it. Draining, when well done, is one of the most permanent of improvements; but it does not last for ever. On the contrary, after a time—varying with the

nature of the subsoil and other peculiarities—the value of the improvement becomes less every year, until it is ultimately exhausted. A valuer assessing the unexhausted value of draining done fifteen years ago would be more likely to put it at three than at thirty years' purchase of the increased annual value which it had in the first instance been estimated to confer on the land, and he would look upon a tenant who should presume to ask for an amount equal to thirty years' purchase as one attempting to defraud. Why did not the Duke take the simpler illustration of farm-buildings erected by the tenant as a test of the principle which he condemns? Would he insist that it is unfair that the tenant who erected them should, on quitting, be paid the full value to the owner at which they are assessed by impartial valuers? If not, he admits the whole case of his opponents; for there is no distinction in principle between paying the full value of buildings and paying the full value of drains or other improvements. But to carry out his theory consistently the Duke must insist that if the tenant has enjoyed the use of the buildings long enough to recoup himself for his expenditure with interest, the landlord ought to have them free, even if they are worth a thousand pounds to the estate. To take an imaginary case, somewhat less exaggerated than that above referred to, let us suppose that a tenant erects a covered homestead at his own expense, at the cost of £500. He has a lease of fifteen years to run, and he feeds cattle at such a great profit, and gets such valuable manure from his covered yards, that at the end of his lease he has more than repaid himself for his expenditure, with interest. The covered homestead is worth, say, £400 to the estate at the end of his lease; yet, according to the Duke of Argyll's argument, he ought not to claim a penny for it, as he has already been repaid his expenditure with interest! Now, this supposed case is precisely analogous to that of any other unexhausted tenant's improvement, and it is therefore a fair test-point of the opposite doctrines of the Duke of Argyll and the writer whom he is criticising in the pamphlet before us. Which, then, is the more reasonable and just? Should the tenant be paid the £400—the "full value to the landlord" of the unexhausted improvement? Or should the landlord be allowed to appropriate it?

The Duke's doctrine that there are two factors to an improvement—one the landlord's property, and the other the tenant's investment—holds with buildings as with all other improvements. The buildings would be of very little value if erected in a desert, and their usefulness consists chiefly in their position on a farm where stock may be fed on the produce of the land. The landlord's factor in this case, then, is the ground occupied in a peculiarly convenient situation, and the tenant's is the capital expended judiciously in appropriate buildings. According to the Duke's argument, it follows that if the tenant has enjoyed the use of the buildings long enough to repay himself with interest for his expenditure, when he leaves, the landlord should have them

handed over to him free of cost. If this is not palpably unfair we do not know what unfairness is. The landlord's factor would have remained the same if the buildings had not been erected, and by removing them and selling the materials, the site might be restored to its original condition. Yet if they are allowed to remain, the argument is that they should—as in point of law they actually do, if erected without the owner's written consent—belong to the landlord. It is possible, however, that the Duke may object that the landlord's factor in this case of building is less clearly to be shown than it is with respect to some other improvements. Let us, therefore, take the illustration of his position which the Duke himself gives, namely, that in which a large profit is obtained by adding some extraneous material, such as chalk, to the soil. It is the mixture of the two materials, the clay and the chalk, the Duke says, which result in increased productiveness, and he complains that Mr. Bear asserts that the man who contributes the chalk has an absolute right to the whole result for ever, and that the man who contributes the clay is to get none of it at all, although he has paid for it ten times the sum which the tenant has paid for the chalk. Now, we have already shown the fallaciousness of the "for ever" in this complaint. The chalk does not last for ever, as the clay does, and consequently the tenant could have no reasonable claim to as many years' purchase of the value of the chalk as the landlord would have to that of the clay. But what ground is there for complaining that if the tenant on quitting is to have the whole unexhausted value of the improvement, the landlord will not receive anything for his factor? The rent is payment for the landlord's factor, and if his clay is left to him increased in value by the tenant's enterprise, why should he object to pay fair compensation for that increment? The tenant pays what is considered a fair amount for the use of the land, the landlord's factor, and his object is to grow as large crops as he can by farming that land to the best of his ability. He finds it, we will suppose, deficient in one of the most important of plant-foods, lime, and this he supplies in the form of chalk, which has generally to be brought from a distance at a great expense. If he remains long enough on the farm to exhaust all or nearly all this plant-food supplied by his expenditure, which is roughly estimated to take place in twenty years, he will have no claim upon his landlord, and his landlord will surely have no claim upon him, as the clay will be at least in no worse condition after the chalk has been all used up than it was in before it was applied. It is equitable, then, that he should wholly exhaust his improvement, and the landlord all the time of the tenancy receive payment for his "factor" in the shape of rent. But if it is equitable that the tenant should wholly exhaust his improvement, it cannot be fair that he should only half exhaust it. As the value of the improvement becomes less every year after the first three or four years, whilst the chalk is thoroughly incor-

porating itself with the soil, we may take eight years as the term at the end of which half the value of the chalk will be exhausted. Then if the tenant leaves at this period, is it not obviously just that he should be paid for the unexhausted value of his improvement as nearly as that can be ascertained by impartial valuers? According to the Duke of Argyll, if the tenant had repaid himself for his expenditure in the eight years, he ought to receive nothing, and the landlord would receive an addition to the value of his property which he had neither bargained for nor paid for. If, through ignorance, the chalk had been applied to land which did not need it, so that no benefit would have resulted, it is generally and rightly agreed that the total loss should fall upon the tenant who made the injudicious investment of capital; but if there is a gain, the Duke maintains that the landlords should take part of it. Thus the tenant is to take all the risk, and only half the profit. All loss is to be his, but only part of the gain. This is equity according to the champion of the landlord's interest!

Let us see what would follow if this theory of equity were logically carried out, as, unfortunately it actually is carried out in practice under our grossly unjust land tenancy laws. If the tenant is not in justice entitled to be paid the full unexhausted value to the landlord of his improvement, it follows that it is not fair that he should be allowed to exhaust that value without paying compensation to the landlord. Consequently if, instead of quitting his farm when the improvement is half exhausted he continues to occupy till it is wholly exhausted, he ought to pay an additional rent on his own improvement for the latter half of the term. As a matter of fact, this is what commonly takes place where there is no lease, and according to the Duke's doctrine of the two factors it is perfectly just that it should be so. We are, however, utterly at a loss to see on what grounds this doctrine can be maintained. Every one admits that if a tenant who has hired under an ordinary farm agreement has maintained his land in as good condition as it was in when he took it, the landlord has no claim upon him for anything beyond the annual rent agreed upon. No addition to the value of the farm, then, is due from him to his landlord. How, then, can it be said that if he adds by his improvements to the value of the estate something which was not due to his landlord, the latter should not pay for value thus received, but should, on the contrary, charge the tenant an additional rent on the gratuity if the latter continues in the farm? Verily such notions of equity are beyond our comprehension.

That the Duke of Argyll does maintain in all its nakedness the doctrine that the landlord should reap where he has not sowed, and that the tenant should never be allowed to take the whole of the crop, the following passage is sufficient to show:—"The equitable arrangement in such cases is surely obvious enough. It is the arrangement which is generally secured under freedom of contract—namely, that the tenant should enjoy the whole increment of pro-

duce until the value of his labour has been returned with profit, and that after this the increment of produce should be divided in the usual proportions which are represented by an improved rent. Even after this improved rent has been obtained by the owner the interest he realises on his capital will be much lower than that realised by the tenant. Consequently there are numbers of men who will always be willing to undertake agricultural improvements on these terms. They are terms which, as a business transaction, are found to be often highly remunerative."

It will be seen from this and from the preceding passage quoted from the Duke's essay that he entertains a most exaggerated idea of the profitableness of agricultural improvements, and the wonder is, seeing that landlords can always obtain money at a lower interest than tenants have to pay for it, that his Grace does not strongly advise his fellow-landlords to carry out all these enormously remunerative improvements themselves. Such advice, if followed, would be highly appreciated by tenants. As a matter of fact, however, it is very seldom that a tenant reaps any advantage from an improvement unless he remains long enough to nearly or quite exhaust its benefits, and too often in these "bad times" he never recovers the whole of his capital. But it cannot be too strongly insisted that the tenant's remuneration or non-remuneration has nothing whatever to do with his just claims upon his landlord at the termination of his tenancy. All that he can fairly ask from his landlord is payment for value received, and this we must insist, in spite of the contrary doctrine of the Duke of Argyll, no honest man can refuse.

In order to show more clearly, as he thinks, the unreasonableness of the tenant's claim to the full value of his unexhausted improvements, the Duke compares it to the claim of a workman for the full value of his labour, and cites the case of an artisan who denied the right of his employer to get any profit out of his labour. The analogy, however, would be more correctly used conversely, for in the cases compared it is the landlord who is in a similar position to that of the workman, and the tenant to that of the manufacturer. The reply to the workman is that his labour is worth what it will command in the market. If he prefers to employ it on his own account, he can do so; but if he lets it out to a capitalist, the latter, who takes all risk, must also take all profit. When he finds his employer's profits are increasing, he demands higher wages, and, as in such a case his services are in demand, he usually obtains what he asks. Thus, he really gets what is a roughly-estimated share of the joint profits of labour and capital, and probably receives more than he would earn if working for himself with little or no capital, and with inferior appliances for making and selling the articles which he is qualified to make. Until co-partnership and co-operation have been made successful there is no better way of assessing his fair share in the joint profits, and he certainly has no right to say to his master:—"You shall take all risks, and if you succeed you shall pay me and my

fellow-workmen part of your profits." Now, the landlord is in a similar position. He lets his land, as the workman lets his labour, to a capitalist, because he has not sufficient capital or skill to farm it himself, and can do better by letting it. He, like the workman again, is paid his wages in the forms of rent, according to the market rate, and he is as unreasonable as the artisan mentioned by the Duke if he says to the tenant-capitalist:—"You shall take all the risk in your investments; if you lose I will not share your loss, but if you gain I demand part of your profits." Should the business of farming be permanently remunerative, the landlord, like the workman, asks and receives the equivalent of higher wages for his land, because the demand for it increases. In no other way can he justly claim to share the profits of his tenant's enterprise, unless he enters into co-operation with him, by joining in carrying out improvements, or by letting his farm at a specially low rent for a certain term on the distinct understanding that certain improvements are to be made by the tenant.

The form of co-operation last mentioned is what is termed an Improvement Lease, and on this point the Duke claims to have convicted his opponent of inconsistency. As the point is an important one, we give the passage at length:—

"It is indeed well worthy of remark that, although Mr. Bear states his principle with great clearness, and with manifest sincerity of conviction in its fairness, he nevertheless admits that it does not apply in one particular case—that case being the very one which brings it to the sharpest and clearest test. I refer to the case of what are called Improvement Leases. An Improvement Lease is one under which one man hires the land of another at a certain rent, and generally for a longer term than usual, because of the large outlay which the improvement of the land requires, and because of the consequent length of time required for the repayment of that outlay with a profit. In this case Mr. Bear admits that no compensation is due to the tenant at the termination of the lease, because he has already got that compensation by specific agreement in the lowness of rent, in the length of enjoyment, and in the increased returns. But this admission is quite inconsistent with the principle that what is due to the tenant is the 'full value to the owner' of the improvement effected by the tenant, however long he may have enjoyed it. The conclusion Mr. Bear comes to in respect to Improvement Leases is indeed obviously right, but it rests entirely upon the opposite doctrine to that which he had before maintained. It rests upon the doctrine that a certain length of enjoyment does equitably exhaust the tenant's legitimate interest in results which are not due to his outlay alone, but to that outlay combined with other elements of value which are not his own, but the property of another."

Where is the inconsistency? The writer referred to has never argued that the landlord should pay for improvements twice over, which he would do if after in reality paying for them beforehand in

the form of a reduction off the rent that the land would let for to a non-improving tenant, he were called upon to pay again when the tenant quitted the farm. The Duke is incorrect in stating that this conclusion rests upon the doctrine that a certain length of enjoyment equitably exhausts the tenant's claim for the value of improvements. It is a certain length of enjoyment *plus a sum allowed annually off the rent by way of payment by instalments for the improvements*. In short, the arrangement is based on a rough estimate of the full value to the landlord of the stipulated improvements, and an admission of its equity cannot, therefore, be inconsistent with Mr. Bear's doctrine. Nor would he deny that length of enjoyment alone would be sufficient to satisfy the just claims of the tenant; only the term must be long enough to approximately exhaust the value of the improvements, which, again, must all be made at the beginning of the term—the great mischief of this kind of payment to tenants. The Duke contends that "every lease is in its own proportion an improvement lease;" but we have already in effect disposed of this doctrine, and it is distinctly refuted in "The Relations of Landlord and Tenant," page 80, where it is shown that as an improving and a non-improving tenant in ordinary instances hire on the same terms, the Duke's argument is unsound. The "preferential rents," about which the Duke has so much to say, may be payment for political subserviency or game devastation, or they may be charity; but compensation for unexhausted improvements they cannot be, except where there is an Improvement Lease. Indeed, a low rent, especially when, as usually, accompanied with swarming game, is never an inducement to improvement, but is rather a *solatium* for a hand-to-mouth system of farming rendered advisable by the insecurity of tenant's capital. As to the prevalence of these "preferential rents," which the Duke is never tired of dwelling upon, and upon which he bases a great part of his argument, we are of opinion that his Grace very much overrates it. From Scotland we hear of farming failures by wholesale, and in all parts of England farms are being vacated and rents reduced. The "preferential rent" of a few years ago is the commercial rent of to-day. Nevertheless, we freely admit that many farms have been let at what, until recently, were lower rents than could have been obtained for them in the open market; but what we contend for is that the bonus thus allowed to tenants has commonly been virtually a bribe to political subserviency, or a payment for game damage, and that even in the comparatively few cases in which it has been the result of pure generosity or easy-going indifference, it has never been regarded as payment for, and has not conduced to, agricultural improvement.

Having, so far, dealt with the Duke's objections to what we regard as the only equitable principle of Tenant-Right, we shall next week conclude our notice of his essay with some remarks upon those proposals of partial compensation to tenants to which he has given his assent. We owe no apology to our readers for thus

dwelling at length upon this pamphlet, because it is the most important contribution to the landlord's side of the question before us which has yet been published; and the position which *The Mark Lane Express* has taken upon the subject since it first became a topic of public discussion renders it imperative upon us to give to the Duke's essay a distinct and comprehensive reply.

In proceeding with his remarks upon the proposals of the advocates of compensation to tenants for their unexhausted improvements, the Duke of Argyll contrasts what he terms the extreme doctrine laid down in "The Relations of Landlord and Tenant" with the views of Mr. James Howard and Mr. C. S. Read. The proposition of these two gentlemen the Duke describes as simply one for such a fair amount of security for tenants' capital, and for a return upon it, as will be adequate to encourage and stimulate healthy enterprise in the cultivation of the soil, with especial regard to repayment for so much of their outlay on real improvements as they have not been allowed time to recover out of the increased profits arising therefrom. To this proposition the Duke declares he gives his "most unreserved assent"—with respect to which admission the first question that arises in the mind of the astonished reader is, Why, then, did not the Duke support the Landlord and Tenant Bill? That measure would have been accepted as a fair settlement of the Tenant-Right claims, and by none was it more strenuously supported than by the author of "The Relations of Landlord and Tenant." Under it the tenant would have been secured compensation for the unexhausted value of his outlay in improvements which added to the letting value of the farm. The Duke, we presume, would draw a distinction between the unexhausted value of outlay on improvements and the unexhausted value of the improvements themselves; but practically there would be no difference in the vast majority of instances. In the case of a tenant quitting a farm immediately after having executed some especially profitable improvements, the unexhausted value of the improvements themselves—that is, the result of the outlay—would be greater than the unexhausted value of the outlay, which could never exceed the amount spent. But the Landlord and Tenant Bill especially provided against the summary dismissal of improving tenants, by insisting on a year's notice to quit in the case of tenants from year to year, a provision which would in effect have afforded security for the enjoyment of the result of an improvement for two years after its execution. Now, agricultural improvements are not usually so valuable but that after two years' partial exhaustion of their results the amount of the outlay upon them would cover the amount of their unexhausted value to the landlord. That in exceptional cases the tenant would not have received the full value of his improvements under the measure referred to must be admitted; but in practical legislation we never expect to carry out perfectly abstract principles. When we assert that the tenant has a just claim upon the landlord for the

full value of his improvements, we simply state what is true as a general principle. When we come to deal with the question by legislation, we have to consider how that value can be ascertained, and then we have to admit that it is extremely difficult to assess the value of an improvement independently of a consideration of the amount of outlay expended upon it. Just, then, as we arbitrarily fix upon a certain term of years as that within which we assume an improvement of a particular class to be exhausted, so we assume that the value of a real improvement is, at the time of its completion, the sum expended upon it. Upon this assumption the Landlord and Tenant Bill, as a scheme of practical legislation, proceeded. It is important to notice, however, that it contains nothing to support the Duke's plea that if a tenant has been repaid his expenditure with profit he shall have no claim with respect to his improvements. There was not a word in the Bill about the advantages which the tenant may have received from his improvements. He is to be paid the unexhausted value of his outlay, if that has added to the letting value of the holding, whether or not he has derived profit from his investment. Taking the Landlord and Tenant Bill, then, as the best exposition of the views of Mr. Howard and Mr. Read, we cannot admit that the Duke of Argyll is justified in assuming that there is a division in the camp of the Tenant-Right advocates to whom he especially refers. We do not, of course, presume to commit the gentlemen just named to all Mr. Bear's views; we simply assert that they are not shown to be antagonistic to these views. The isolated passage from one of Mr. Read's speeches does not appear to us so clear of ambiguity as the Duke considers it to be. It is this:—"A farmer ought not to be compensated for all the improvements he has effected, but merely for those of which he has not been allowed to reap the benefit." If by "benefits" Mr. Read meant the complete benefits, these would comprise the exhaustion of the advantages of the improvements.

It is at least something that the Duke should admit the justice and expediency of encouraging agricultural improvement by giving to tenants security for the unexhausted outlay on such improvements as they have not reaped the advantage of when they quit their occupations. From one of the most vigorous opponents of even so mild a measure as the Agricultural Holdings Act we should not have expected the admission. But the Duke hastens to assure his readers that under the present conditions of letting and hiring land such security is really quite sufficiently enjoyed. Under a lease he assumes that the outlay on improvements is usually repaid with great profit, although the extensive farming failures in some of the best-farmed districts of Scotland seem to tell a different tale. In support of this assumption his Grace cites the keen competition for farms which until recently prevailed. This keen competition no longer exists, and when it prevailed it was no proof of the security of tenants' capital if invested in anything beyond unim-

proving farming. There is so general a love of agricultural pursuits amongst the people of this and most other countries that as long as a bare livelihood can be obtained by farming, those who are brought up to it will, for the most part, cling to it, and their numbers will be constantly recruited by an influx of outsiders. Nor is it only men who have a living to get by their business who comprise the competitors for farms. On the contrary, the demand for land is greatly increased by the requirements of those—a very numerous body—who desire to farm merely for amusement, caring little for profit, and not even shrinking from a small annual loss. The keenness of competition for farms, then, is no measure either of the security of the farmer's capital or of the proportion of his profit. On the other hand, the farming panic which at present prevails is a sad proof of the unprofitableness of farming, and that unprofitableness we have good reason to believe is partially owing to the insecurity of tenants' capital.

In maintaining that under the existing conditions of contracts for the hire of land tenants really enjoy quite sufficient security for a liberal investment in improvements, the Duke is strongest where he deals with long leases. We have already admitted that a lease, if long enough, and if "farmed out," affords a sufficient security to the tenant for improvements executed at the commencement of the term. But a tenant is very seldom in a position to carry out all desirable improvements immediately after entering into his occupation; and when he is it is both inconvenient and extravagant to do all the work at once. The most natural, convenient, and economical plan is to execute improvements by instalments. For instance, if a tenant takes a farm which requires draining, he will be able to do the work very much more cheaply if he drains a limited number of acres every year, in the slack season, till he has gone over the whole farm. In the winter he has very little profitable work for his regular hands, and these will suffice to do the work of draining on from ten to twenty acres every winter according to the size of his farm. If he does not set them to draining, he will very likely have often to "find them a job," which means set them to work on something which it will not pay him to do, just for the sake of finding them employment. Thus, a farmer who had security for his improvements might drain his farm in the most economical way. His men would earn higher wages in the slack season, and he would have profitable work done instead of the "marking time" work which he would otherwise have to set his men to rather than pay them off when they would have only the Poor-law Board to look to for maintenance. If, on the other hand, he has, by the exigencies of his contract, to do all his draining at the commencement of his lease, he will be compelled to offer excessive wages in order to attract additional workmen from a distance, and his improvement will thus cost him much more than it would have cost if he had taken his time about it, whilst for the remainder of his lease, after the improve-

ment has been executed, he will have labourers on his hands in the slack seasons with no remunerative work for them to do.

It is further to be observed that tenants do not always farm out their leases. Indeed, in Scotland—if we may accept as true recent public statements—it is rather the exception than the rule for a farmer to complete his term. *The Scotsman* has recently cited many cases in which improving tenants, living under anything but "preferential" rents, have had to quit their farms nearly or quite bankrupt, without a penny for compensation, leaving their unexhausted improvements as a bonus to swell the value of the "landlord's factor" in the estate. Again, an improving tenant may die prematurely, and it may be extremely inconvenient, or impossible, for his widow or heir to carry on the farm; yet if it be given up, all the unexhausted improvements of the late tenant have to be presented as a free gift to the landlord, who is thus enriched to the impoverishment, perhaps, of the unhappy widow and orphans. Such a lamentable result has occurred in numberless instances, although they have only seldom been made public. A lease, then, cannot be an adequate encouragement to a tenant to carry on improvements as long as they are desirable, and it is not in all cases a sufficient security for investments made even at the beginning of the term.

Although the Duke plainly states his preference for leases, he professes to find much in favour of the arguments of those who assert that the yearly tenant has really a better security for his capital than the leaseholder, because he is less liable to be turned out of his farm, and less frequently has his rent advanced. We believe that the chief reason why the yearly tenant's rent is not so often advanced as the leaseholder's is because he, as a rule, affords his landlord smaller opportunity for appropriating his invested capital. He knows that his greatest safeguard against an advanced rent is to keep his farm poor in condition, or at least to avoid all such expenditure as he cannot reap the advantage of quickly. When the Duke asserts that the tenant from year to year has a sufficient security for his outlay in improvements, because he has a reasonable expectation that he will be allowed to hold his farm as long as he desires, provided that he farms fairly, his Grace must be perfectly aware that a "reasonable expectation" is far from being a real security. He knows that a petty dispute about game, political insubordination, religious rancour, or a quarrel with the agent, may at any time cause a disruption of the friendly relations between the yearly tenant and his landlord, upon which alone, the "reasonable expectation" of the tenant is based. He cannot honestly pretend, then, that a yearly tenant, with or without a "preferential rent," has anything approaching to what can properly be called security for his investments in improvements of a durable nature.

The Duke of Argyll's strongest objections are reserved for the proposal to make a compulsory law, to over-ride what is called "freedom of

contract," with the object of giving to tenants a real security for their investments of capital on their landlords' estates. Such a law, he says, would be both unjust and unsuccessful. It would be unjust, he maintains, because tenants in very numerous instances are really paid for their improvements beforehand in the form of "preferential rents"—an argument which, although the Duke again and again recurs to it throughout his essay, we must consider to have been already sufficiently confuted. It would be unsuccessful, he alleges, because landlords would at once put up their rents, and so discount all the prospective advantages which their tenants might expect to reap from a compulsory law. Let them put up their rents if they can, is our reply to this argument. We have a strong faith in the commercial system, thoroughly applied, as the best in the long run for both parties concerned in what is really a commercial contract. We take it that tenants, with extremely few exceptions, pay, in one way or another, for all the advantages which they receive when they hire land. The real or imaginary prevalence of "preferential rents" unnaturally increases the competition for farms, and if a few are benefited the majority have to suffer. Let there be a fair field and no favour, with compulsory compensation for value received by the landlord, and the freedom of farming that would be sure to result from the thorough application of the commercial system, and farmers would be in a better and more independent position than they now enjoy, held as they so commonly are in leading strings, with the sugar-plum of a "preferential rent" offered as a *douceur* for all grievances.

And if the farmers would be better off under the commercial system, with legal security for their unexhausted improvements, it is obvious that the consumers, whose claims upon our legislators are pre-eminent, simply because they comprise the vast majority of those concerned in the proper cultivation of the soil, would receive still greater advantage. No one can pretend that "preferential rents" are beneficial to the nation at large, as it has been distinctly proved that an allowance off a fair commercial rent is no stimulus to the development of the resources of the soil, but rather the reverse.

The farm labourers would especially reap the advantage which the consumers would derive in common with them from a compulsory Tenant-Right law, which would do more than anything else could do to promote the application of capital to the development of the resources of the land, and so increase the demand for their services.

Who, then, would be injured? We have given our reasons for expecting that consumers, tenants, and labourers would be benefited; and landlords, on the Duke's own showing, would be enriched by the receipt of higher rents. Against such universal benefit all that there is to be urged is a sentimental objection to over-riding freedom of contract, an objection that has been repeatedly over-ruled by our legislators, and that becomes weaker every day as the desirableness of the end to be attained is more and more regarded as

the primary consideration in politics, and as the force of precedent and prejudice becomes a less important factor in our social economy. Permissive legislation has been tried, in the form of the Agricultural Holdings Act, and has been found to be, as we predicted it would be, an utter failure. There never was a time when there was less necessity for insisting upon a compulsory law of Tenant-Right than the present. Just now tenants have, for the first time in this generation, the upper hand in contracting for the hire of land. Such a dearth of demand for farms as now prevails has not been known for nearly half a century. If the farmers only knew their strength they could exact such terms for themselves as would at least secure them from such disasters as they have in recent years been liable to. But low rents, and freedom of cultivation and sale of produce, will not by themselves sufficiently stimulate agricultural advancement, simply because they can never give adequate security for capital invested in durable improvements. The public are greatly averse to the recognition of the community of their interests with those of the tenant-farmers, as we see only too plainly in relation to the meat-supply question. If they were both wise and well-informed they would insist on such legislation as would render the capital of farm-tenants secure against confiscation, just as they would consent to provisions for ensuring the valuable live stock of the country against decimation by foreign diseases. But we have little hope, as yet, of interference from outsiders, and our arguments are, consequently, chiefly addressed to the farmers, who have quite sufficient political power, if they would but exercise it courageously and independently, to ensure the triumph of their just demands, and the protection of their lawful interests. At a time like this, when they have so small an inducement to cling to their holdings, they have not the heart and the will to emerge from their political minority—not to call it slavery—their case is hopeless indeed, and those who wish them well must resign themselves to seeing Lord Burghleys sent to represent the agricultural interest until the political preponderance which that interest really has at its command has been swamped by a re-distribution of political power.

To come back from a divergence which, although appropriate enough to the main issues of the subject before us, is not distinctively a portion of our reply to the Duke of Argyll's essay, we may conclude our remarks upon that production by summing up its author's leading positions. His foremost plea against what we should regard as a satisfactory provision for securing the capital of improving tenants is that nothing whatever needs to be done, because, he asserts, farm tenants already enjoy a somewhat uncommon security for their capital. But, as if he foresaw that this plea would not hold good when tested by the light of experience, he admits that tenants should—by means of voluntary agreements which, with extremely few exceptions, landlords absolutely refuse to enter into—be afforded security for such of their investments as they have not time to profit by before they

quit their farms, but contends that all ulterior profits upon those investments should go to the landlords, although the latter are to bear no portion of the loss incurred in unprofitable investments. Lastly, he urges that, whatever additional security may be required for tenants' capital, it would be both unjust and useless to afford that security by means of a compulsory law. Now, with respect to these three positions, if our arguments are sound, we have shown that the first is based upon incorrect statements, the second upon an utterly one-sided idea of justice, and the third upon a combination of fallacious arguments and impolitic prejudice. If this summing up of our controversy with the

Duke is not very complimentary, the opprobrium must be attributed to the weakness of his case, and not to his advocacy of it. Having so weak a case it is to his credit that he has not taken the proverbial course of "abusing the plaintiff's attorney." There is not a word of abuse, or even of denunciation, in his whole essay. All is calm argumentation, whether valid or not; and if we, in our reply, have not uniformly, as we think we have generally, preserved an equal coolness, a sufficient excuse is afforded by the consideration of the fact that, whilst the Duke is on the at present winning side in the contest, we are concerned for the sufferers from an intolerable wrong.

MR. JAMES HOWARD ON TENANTS' OUTLAY AND COMPENSATION.

The following letter to the Editor was written before Mr. Howard had seen our remarks in reply to the Duke of Argyll upon tenants' outlay and compensation, which appeared in our leading columns on the 17th inst.; and our leader was in type when his letter was received. We have since obtained Mr. Howard's consent to the publication of his letter in order to show that we correctly explained the views and intentions of the authors of the Landlord and Tenant Bill in making the outlay of the tenant the limit of his claim for compensation in respect of exhausted improvements.

MY DEAR SIR,—In reply to your letter of yesterday, the word "outlay" was introduced in the Landlord and Tenant Bill after due consideration. When drawing the Bill, we did not lose sight of the fact that by judicious cases a tenant might often add to the value of an estate much more than the amount of the outlay upon his improvements. For instance, a well-known agriculturist in Worcestershire, at small cost, embanked a meadow for short distance at a particular point which raised the value a considerable number of acres. Suppose under these circumstances that the word "outlay" had been omitted in the Act, and the tenant had been allowed to claim for the value of the improvement, the arbitrators, as practical men, would have been sure to ask what was the amount of

the outlay? and would have measured the value accordingly. To avoid doubt upon the point, and to shut the mouths of objectors like the Duke of Argyll, the word "outlay" was introduced with a full conviction that in practice it would make no difference. On broad principles I think the tenant has just as righteous a claim to be paid for the exercise of his skill in raising the value of an estate as for the outlay of his money; but in framing the Bill, what was likely to be carried had to be considered. From the foregoing explanation you will see that we are in entire accord upon the question at issue.

Since my return from Africa I have been perpetually occupied with my own affairs, or long since I should have replied to the Duke of Argyll's criticisms of my statements and probably upon the whole question. In my opinion his Grace misstates the views of his opponents in a manner almost unpardonable, and like other writers who have quoted from my "Freedom of Contract," he never once attempted to grapple with the arguments. After reading the pamphlet I laid it down with the thought that the Duke might well be asked how, as a member of the Gladstone Cabinet, and therefore responsible for the Irish Land Act, he could consistently take up many of the positions laid down in his pamphlet?—Yours very truly,

JAMES HOWARD.

Clapham Park, Bedfordshire.

September 15th.

VALE OF CONWAY PRIZE FARMS.—The judges voted by the Vale of Conway Agricultural Society to make awards for the best farms in the above district have handed their report, which is as follows:—To the tenant of the best, best managed, and best cultivated farm, not less than 10 in extent—1st prize, £5; 2nd prize, £3. Three competitors. The 1st prize we give to Mr. John Owen, Llyn Ucha, Llangerniew, a farm of 81 acres, which is in a high state of cultivation, very neat, and well managed. 2nd prize we give to Mr. William Morris, Hendre, Llangerniew, comprising 47 acres well cropped and stocked, and fences, &c., very neat. To the tenant of a farm exceeding 150 acres who has laid down to permanent pasture not less than 34 acres in the most approved manner, £3. Two competitors. The prize we give to Mr. Borthwick, of it-y-wrach, Llanrwst, who has laid down 40 acres of very good grass. To the tenant of a farm exceeding 80 acres who has laid down not less than 16 acres to permanent pasture in the most approved manner, £3. Two competitors. The prize we give to Mr. Borthwick, Tanderwas, Bettws yrgele, who has by far the best field of grass we saw.

THE IMPORTATION OF EGGS.—Last year the value of the eggs imported into England was £3,613,231, but even this large importation failed to satisfy our requirements, and the high price of eggs in the market at the present time shows that we can buy more and eat more if we can only get them. It seems probable that substantial help in this as in other matters relating to food supply will come from the other side of the Atlantic. Canada is establishing an egg trade with us which promises to assume important dimensions. Last week one steamer alone brought to Liverpool from Canada 280 barrels of eggs, and there is every prospect of a continuous stream of eggs setting in from that country. The Canadians cannot, in fact, keep up with their hens, who lay more eggs than the colony can consume. The market report of the Hamilton (Ontario) *Spectator* of the 9th of August mentions that eggs were "very quiet," there being really no wholesale trade in them at present. In Ottawa fresh eggs were selling at 13 cents, that is, sixpence, a dozen. Eggs at this price would be a boon to the British housekeeper, and might take the place of meat, in which case there would be less grumbling and gout.—*Pall Mall Gazette*.

PROSPECTS OF THE TENANT-FARMER.

There is not a single department of agriculture which can accurately be said to pay, unless it be dairy farming, at the present time. Stock breeding is remunerative only so long as diseases can be kept from the herds and flocks, the risks being so great that the industry is discouraged, and is now, like every other branch of farming, in anything but a thriving condition. It has been the policy of some political economists to represent the vital interests of trade and agriculture as being antagonistic, and a more mischievous doctrine it would be difficult to conceive. The home or consumptive trade of the country is positively dependent on the productiveness of the land for its vitality, and from that source comes what is called the spending power of the people. The export trade may be represented in some instances as a branch, and in others as merely a parasitic growth, in either case deriving direct or indirect nourishment from the same tree, the roots of which are in the soil. Therefore the depression now obtaining in trade and commerce has for its greatest factor agricultural adversity. When we speak of the times being bad, and trade being dull, we use conventional terms to express the effect of certain causes which are not usually apparent, and which may be unknown or not understood. In the present instance there are two primary causes at work, one of which is on the surface, and the other deeply hidden. A long and almost unbroken series of unfavourable seasons—in which, as in the present year, climatic influences have been more or less adverse to agricultural operations—has resulted in diminished capital and an unprosperous condition of agriculture throughout the country. This is apparent and clearly intelligible. The occupation of the farmer—so coveted by naturalists, envied by townspeople, and eulogised by all—is, in one sense, entirely dependent on the elements, over which he has no control, and against which he is unable to provide. Burns, who was well acquainted with the vicissitudes of a farmer's life, spoke feelingly as well as practically when he declared that "The best-laid schemes o' mice and men gang aft a-gley;" for no amount of foresight, energy, intelligence, and capital combined can alter or anticipate the workings of Nature. Townspeople, especially, will do well to give full weight to this set-off against the health, rude plenty, and unconventional freedom a country life affords. On the other hand, there is, and has long been, an active influence at work—occult in its nature and recondite in its bearings—antagonistic to farmers, which, when "divested of its accidents" (like the "elemental bone" in Charles Lamb's cold shoulder of mutton), will be found to be a hydra-headed spectre, amongst whose many countenances may be recognised Entail and Primogeniture, Game Laws, Hypothec, Preference Rents, and that grinning Nephthopheles—Freedom of Contract. With this only we have to deal; and leaving, therefore, out of consideration all thoughts for the morrow, so far as the elements are concerned, we may safely

devote our whole attention, for the time, to such matters connected with our interest as are clearly and distinctly within our power and control.

The adverse influences delineated above are clearly and distinctly within the power and control of the tenant farmers, if they could only be induced to take advantage of their opportunities. It is quite time a fresh line of action was not only chalked out, but scrupulously walked upon. Tenant farmers find the capital—all insufficient though it be—to cultivate the soil of England, which gives "rights," privileges, and "sport" to those who, by virtue of their birth, are the owners thereof. This class then, these tenant farmers, are, at the present time at least, as indispensable to the owners as to the public. Why, then, should they fear either the one or the other? The farmer has to "carry on his back"—to use the words of a homely old adage—the "parson and the squire." He pays tithes to the one and rents to the other. But in this paying for value received (that is, the use of the farm; for tithe, rent-charge, and rent proper are all the same to the farmer, and parson and squire must settle that point between them) there is nothing in law or equity to call for any sub-contract on the part of the farmer to bolster up the spiritual power of the one, and to further the temporal power of the other. And we are very distinctly of opinion that the time has come for him not only to cease to do either, but positively to refuse to do anything of the kind for the future.

We have said many times that farmers do not want "protection." What they need is emancipation. They sign contracts containing antiquated and prejudicial stipulations; they allow themselves to be eaten up alive with game; they submit to the degrading and insulting espionage of ignorant game-keepers; they vote for the landlord's nominee; and they go to the landlord's church, in conformity to a tacit or openly stated understanding—possibly for a similar reason to that which is given to explain why the old wooden plough is not quite out of date yet; that is to say, the present generation of farmers are loth to depart from time-honoured customs, recollecting the paternal advice:—

"Then, Tommy, my lad, never heed what they say,
But get thee on still in thee feyther's owd way."

But the emergencies of the case call for a departure from these traditions of the elders. The British farmer of to-day must think and act for himself. He must work to a plan, and that plan should include the liberty to grow what he pleases, and to sell what he pleases (without injuring his landlord), and, at the same time, an agreement which would secure to him the value of anything in or on the farm at the expiration of his tenancy which was not there at its commencement. If these equitable conditions were pressed, especially at a time like this, landowners would be as unable to refuse them as they are to farm the land themselves. It is a matter affecting the public, and public attention

should be directed to it, and public opinion expressed on it; but the farmers have quite power enough to work out the reform for themselves if they would only act like men—commercially, politically, and socially.

Meanwhile, something will have to be done to relieve the position. Rents must come down; and, indeed, there are not wanting signs of a very general reduction. But, although this is the readiest course to pursue, it cannot do more than give a temporary relief of the nature of a second mortgage. Rents are too high only because the conditions under which the farms are generally let are not such as will admit of agriculture becoming a remunerative industry. That being so, no permanent relief will be afforded by reduced rents. The gist of the whole matter lies in the covenants. They will have to be constructed on a very different basis—not of protection, but of liberty. The question of large and small farms has nothing whatever to do with it. There are now, practically, only two classes of farms which can afford their holders a reasonable livelihood—small farms and large ones. In the

one labour takes the place of capital; in the other at least £12 10s. per acre are required. The number of the former is gradually diminishing, but it will be a long time before the class of men who rent an acreage which is within the scope of their own labour to cultivate becomes extinct. The old and wise saw which declares that "he who at the farm would thrive must either hold the plough himself or drive" is likely to find a modern instance as long as farming lasts. But the large farm is more suited to the requirements of modern agriculture. The capitalist alone can provide stock, machinery, and appliances which are positively necessary, and on large farms only can the landlord erect suitable buildings and accommodation. To split up large holdings into smaller ones would be a mistake and a retrogression. There is but one course open to the English farmer; he must be both a breeder and feeder of stock—a manufacturer of meat, and other animal products. There can scarcely be a division of opinion on this point. To do this he must have a compensating lease, or some other form of Tenant-Right. Now is the time to get it.

THE AMERICAN DEAD MEAT TRADE.

Corroborative evidence reaches us, even as we write, from across the Atlantic, of the correctness of our views upon this subject as recently printed in these columns. Of a dozen American papers there is not one the tone of which is not tinted with the conviction that, notwithstanding the abundance of cattle from Texas and Colorado, there is but little adapted for exportation to England. There is a prevailing want of quality. Let us call them as they come. In *The Albany Country Gentleman* we read in the New York market report, Aug. 20: "Beef—per cwt., dressed beef—extra beoves 13d. 50c. to 13d., good 11d. 25c. to 11d. 50c.; average, 10d. 25c., Texans 7d. 50c. to 10d." In *The American Agriculturist*, September: "Fat stock fit for shipment scarce, the best reaching 18½c. per lb.; whereas common stock had a hard time at the close of our report, and Texans sold for 7½c. to 9½c. per lb." In *The Michigan Farmer*, Aug. 31, we read: "Live stock markets, Detroit.—A fair supply of State cattle at the Central Yards, and quite a large supply of Western cattle. The supply of Texans, Cherokees, Colorados, and other light stock from the South-west have been so large as to force prices down. Good fat cattle are in request, and are picked up readily by the shippers for New York and the East. Only the best cattle are wanted to meet the demand of the export trade. High-grade Shorthorns are what are needed, and the sooner our farmers get to using good bulls the more profitable they will find their cattle stock." At Chicago: "As the week passed the market improved, and good cattle were wanted. One lot of 88 good steers sold at 5 d. 60c. Large numbers of cows and Texans, from 700 to over 900 lb., sold from 2 d. 50c. to 3 d. 50c." At New York: "The exporters have taken to Texans, and 800 of them were killed to be taken as dressed beef on board the steamers. There is a considerable demand for steers to ship dressed, arising from the prohibition of cattle into England from the Continent on account of the rinderpest. Most of the stock offered at the opening of the market last week were Texans, Colorados, and Cherokees, and the quality below medium. The rest of the week the demand was very moderate, and a large proportion of the cattle was rather common, and

but ill adapted to either the shippers or to the butchery. Choice cattle were needed." Then, in the *Union Stock Yards, Chicago*, on Tuesday: "A large proportion of the fresh receipts were butchering cattle, consisting of Texas and Colorado cattle, with a considerable number of native cows and common steers. All cattle of this kind sold at extremely weak prices, and stock steers were in very slow demand." On Wednesday: "Weather remarkably pleasant; buyers disposed to take hold freely as to all good and choice shipping cattle. It should be remarked, however, that the proportion of really good cattle among the offerings was small. Choice heavy ripe steers were wanted for the English trade, and the few lots of these that were offered brought comparatively strong prices. A large supply of Texas, Colorado, Montana, and Minnesota cattle, but trade in this department was very slow, at weak, irregular prices." *Weekly Globe*, Aug. 24, Montreal: "About 60 cows and 40 butchers' cattle were offered to-day. Little inquiry was experienced for milch cows, and still less for beef 'critters.'" *Drovers' Journal*: "Friday last Mr. Bird bought for use in his meat-market a heifer which weighed 1,320 lb., and cost 4 d. 75c. per cwt. Her flesh was fine-grained, tender, and cheap at the money, even as stock is selling now. She was about three-fourths Shorthorn, and shows what quality will do on a hard market." This drift of quotation indicates but one feeling across the herring-pond, and is all in favour of spirited action amongst breeders at this side of the ocean. In an amusing notice of Shorthorn cattle, advertised to be sold at Wisconsin State Fair, at Janesville, on September the 11th, 12th, and 13th, after a fling at the "gild-edged strains," and an emphatic declaration that the cattle they propose to set up for auction "are equal in point of purity of breeding, and also equal, if not superior, in point of individual merit, to many of the strains that command fancy prices, simply through the accident of fashion," the sellers proceed to express their "trust that the farmers of Wisconsin will not let this excellent opportunity for securing well-bred bulls at reasonable prices pass by them unimproved. Good beef is bound to bring a good price. The immense foreign demand for choice beef has created a market

for it, which our stock-raisers should not fail to profit by. Since scrubs and scallawag steers are not wanted to supply this growing demand, we see no reason in the world why the breeders and feeders of high-grade Shorthorns have not a brilliant future in store for them." It is quite clear now that, at present and for some time to come, until a revolution in point of quality shall have been effected, there is no prospect of beef supplies to the English market from the Western and South Western States of America. "British farmers have little or nothing to fear from any shipments of Texas or native cattle" are the words into which a writer in *The National Live Stock Journal* has translated the opinion of their recent visitor Mr. Macdonald: "the proportion of bone and inferior meat in these cattle is too great" at present. They were struck by Mr. M.'s "choice of steers in several lots being invariably the compact, deep, round-bodied, comparatively fine-boned animals; whilst he has a hearty detestation for 'Gothic-roofed,' sharp-rumped beasts." They are pleased, too, that he notes the importance attached to pedigree by the breeders of Iowa. Well, now, the moral of this story is that the English agriculturist ought to be awake to this new demand across the Atlantic, and, being assured that the best always win in the end, and that the course is open to all, to avail himself of the many opportunities which Shorthorn sales in this country afford of picking up well authenticated cows of old blood to pair with the choice bull of blueat blood, which he can now buy so cheaply at Bingley Hall and elsewhere. And he will find a good market at home for his damaged corn stuffs, as well as in the young stock sales a protective margin against the vicissitudes of our harvest weather. Let the intelligent take this hint before it be too late.

All things are changing. Steam launches are about to supersede the old-fashioned herring coble, and whole villages are in alarm, anticipating ruin by the score. But this is not the way to meet the improvements of science. Rather look out to see whether you cannot adapt them to your own use. Capitally writes an American: "No money is ever made in buying unthrifty and inferior stock, unless it be immediately disposed of. It will not do to keep; it will yield no profit in grazing or feeding. In the first place, every pound of flesh we put on in animals of this description will cost from 30 to 50 per cent. more in feed than the flesh we make when well-bred, and well-formed stock is used, and they are worth less to sell in the end. There is no excuse now for a continuance of this unimproved, inferior, and unprofitable stock upon our farms. In the first place, well-bred and well-formed male animals should be secured in every neighbourhood, and no calf from any other should ever be reared, because it will not pay. There is no excuse for breeding a cow to an inferior and ill-bred bull, when a good one of pure blood can be had at from 100 to 200 dollars a piece, which the increased value of 20 calves would pay in a single year. But besides, all well-to-do farmers, whose land is adapted to grazing, should have a few *thoroughbred cows*: it will be an investment that will make the most satisfactory returns, not only in the pleasure but in cash." Besides all this, there is a pleasure which every enterprising citizen should appreciate, in the reflection that his labours are contributing something to the promotion of the general welfare. This excellent advice, wafted to us from our Transatlantic cousins, we heartily endorse.

VIRIL.

A PRACTICAL IMPLEMENT EXHIBITION IN SUFFOLK.

On September 21st and 22nd a highly interesting trial of agricultural machinery was carried out, near Bury St. Edmund's, by Messrs. Ransomes, Sims, and Head, acting conjointly with Messrs. Barford and Perkins. This exhibition took place on the farm of Mr. Harvey, of Timworth, three miles north of Bury; and it was mainly organised by Messrs. Castledine and Nunn, the enterprising implement agents of Bury St. Edmunds. But an important element in this organisation was Mr. Harvey, who considerably placed any quantity of the land and crop of his 800-acre farm at the disposal of the firms for whom Messrs. Castledine and Nunn acted. Mr. Harvey, also, as Mr. J. E. Ransomes said, provided an unlimited number of horses and men, which conduct Mr. Barford contrasted with the treatment they generally met with at Royal Shows, where they often had to pay £10 per acre for every acre they required to show their implements at work—and this charge was made, too, at the same time that they ploughed and cultivated the field in a sound and practical manner. A notable instance of this grasping treatment occurred at a recent Show, when the land was hired for ploughing and cultivating at so much per acre. The land was simultaneously being cleared of tares which were sold at a high price per acre, but the tares were not cleared off in the fore-part and middle of the week as fast as the land was wanted, and at the latter part of the week some of the tares still remained, and all the land could not be used although many farmers were taken out to see the implements work. Yet a bill was sent in for every acre that was hired. This, too, was on the land of a noble lord who professes to take a great interest in the progress of agriculture. But it is to be hoped that this noble lord does not know as yet of all the details of this transaction.

And for the credit of the landed interest it would perhaps be advisable to give his lordship a hint of his agent's conduct in the matter, either before the bill is paid or subsequently.

On arriving at the field the first operation we came to was a set of Messrs. Barford and Perkins roundabout tackle, with a three-furrow plough being drawn by one of Messrs. Ransomes' elegantly made 8-horse engines. These three ploughs were being easily drawn through the strong down-trodden clover-layer, with the steam blowing off at 60 lb. pressure. This work, as Mr. Barford explained publicly, after the luncheon, was costing under 6s. per acre, everything included. It was being worked with three men, which, as a rule, are preferable to two men and two boys; for by the men taking their meals at different times the work may be continued all day without the intervals which horses and men ordinarily require. The main object of showing this work was to prove to farmers who have ordinary portable engines for doing the thrashing, con-grinding, and chaff-cutting of the homestead, that by a small outlay they can have a set of tackle and implements that will enable them to be master of their work at such busy times as August, when autumn cultivation ought to be begun, and nearly completed, in ordinary seasons for wheat to ripen in. Or, if any farmer has not a portable engine, this work, in combination with the thrashing going on elsewhere, was intended to demonstrate that for £431 10s. for tackle and implements, £310 for the 8-horse engine of Messrs. Ransomes' that was working it, and of £150 for one of their combined thrashing machines, that is, for £800, a man may be master of the situation as regards himself, and if he be not a large farmer he may earn good sum annually by assisting his next-door neighbours.

Messrs. Ransomes, Sims, and Head also worked their Newcastle prize plough, their single plough and subsoiler, their two-furrow R. J. C. D. plough, a three-furrow plough, while James Barker did a little "prize" work just to show what could be done by way of ploughing furrows in what may be termed perfect form. Brickwork or masonry that had been done with rule and line would not be more accurate than were the furrows that Barker turned. The single plough and subsoiler is an excellent implement for many kinds of tillage and seed-beds, for a pair of horses can easily draw this implement at a depth of ten inches, and as the subsoiler is worked in the previous furrow, the broken subsoil is immediately covered with the furrow being simultaneously turned, while the depth of the furrow alee may be varied from three inches to seven inches, and the remaining depth to the ten inches mentioned, then stirred with the subsoiler. By this arrangement, too, the stirred subsoil is not trodden down again in the same way as it is when the subsoiling arm and share follow the body of the plough. The three-furrow plough was heavy work on this strong soil for three horses to draw, but on light soil with three furrows three or four horses could draw it easily, whereby the work would be expeditiously done, and of course as one man can work three horses, and one man and a boy could easily work four horses, a great saving, both of horse power and manual labour, would be thereby saved.

In adjoining fields Messrs. Ransomes had two thrashing machines at work; one of these was a single blast and the other a double blast machine. These machines have been so long before the public that a general description of them is unnecessary. But we may say that a new expanding screen, of circular form, which is made of an endless wire in combination with an edged screw that runs between each wire, a very effective apparatus. The wire may be expanded so as to suit large or small grain, and the edges of the screw, which work on the top at the outside, pass between each wire so that it is impossible for any grain to stick between the wires further than the top where this screw is placed. Thus each time the revolving cylindrical

screen receives the corn at the bottom it is as clean as it was before being used.

The engines which worked these machines were: first an ordinary eight-horse portable one for the double blast finishing machine, and the new six-horse traction engine for agricultural purposes, which Messrs. Ransomes have recently designed, and fitted with every known improvement. These new engines have been favourably noticed by engineers and practical men, and we have no doubt that in due time they will be extensively used to save horses in hauling machines and their appendages from stack to stack or farm to farm. We are informed that because Messrs. Ransomes have not been able to get a number of orders for these engines completed, this one was kindly lent for the occasion by Mr. Deans, of Baldock, Herts, who has used it for thrashing corn for different farmers in this district, and he spoke very highly of the easy and very effective way in which it did its work, adding that it was a great favourite amongst the farmers whose corn it had thrashed. It is a locomotive engine, and it will take itself from place to place without the aid of horses. This is a very considerable advantage, as pulling machinery of this kind about is very heavy work for farmers' horses, and the animals are only too often strained and otherwise injured. This engine, which has been constructed from entirely new designs and patterns, will easily take a thrashing machine and one waggon from place to place over ordinary farm roads. It is steered from the foot plate, and all the apparatus for starting it, reversing and applying the brake, are placed close together. The engine is very simple, and does not require a skilled mechanic to work it. It is intended for working thrashing machinery, steam cultivation, sawing, pumping, &c., for removing agricultural produce, and in fact for all purposes for which steam can be applied as a motive power in farm work.

A more interesting field-day for exhibiting labour-saving agricultural machinery we have never witnessed, although we have attended most of the principal exhibitions of similar kinds for many years past.

DENBIGHSHIRE AND FLINTSHIRE AGRICULTURAL SOCIETY.

AWARDS OF PRIZES FOR BEST CULTIVATED FARMS, 1877.

JUDGE'S REPORT.

There are ten entries for competition for the prizes offered by the Society this year—five in the class "above 150 acres each," three in the class of "not less than 80 acres and not more than 150," and two in the class of occupiers holding between "50 and 80 acres." Four of the five claimants in the first-named class have repeatedly won prizes for their farms, and the fifth is a worthy competitor. It has been pleasant to walk over their farms, and exchange ideas with them while doing so, but now the task of awarding the prize brings me anxious thought, because of the close comparisons of detail and results to be instituted, and the various practices and customs which have to be considered. One of the five has withdrawn from the competition since inspection, because it was explained to him that there was a technical doubt of his claim being eligible, and this has relieved me of some responsibility, but differences of various kinds in the others still remain. One is a stiff clay land farm, three or four hundred feet above sea level; two are of medium loams and gravelly soils about the same height; and the fourth is a peaty light soil, part of it lying on the rock and part on clay, nearly three times the extent of the others, and from 800 to 1,000 feet high.

The terms of the premium stipulate that all the land held by claimants shall be considered, and its proper subdivision into fields, its draining as to judiciousness, and the state of the

watercourses, roads, fences, gates, stiles, farmyard, &c., as to neat and exact order; also that the arable land shall be under the most approved course of cropping, and the grass land in the neatest and best condition, and that situation and soil shall be duly considered and allowed for.

My award must therefore embrace a consideration of all these points, and the competitors will please observe this. The high-lying farm with its 240 acres of pasture, 80 of oats, and 30 turnips is looking remarkably well. It is under well-sustained management, and the wet season has suited it. The stiff clay land farm is being started in a course of improvement, which will soon raise it to the position of a prime farm. The tenant has occupied it only three years, but in that time has sowed down about 60 acres after cleaning well, has put up new gates to every field, and reduced some old over-grown hedges to a better form of fence by cutting in, and has fallowed and is applying lime to several fields with very good results. He has got a first-class stock of both cattle and sheep grazing upon the farm, and has expended several hundred pounds in lime, bones, nitrate, &c., in improving its fertility, and several hundreds more in improvement of houses and buildings in co-operation with his landlord. The tenant on one of the other two farms has laid out a large sum of money in the improvement and cultivation of his farm, during an occupation of nine years, in the most enterprising and skilful manner. I have known it now for six years, and never saw it more fertile or productive. The crops of barley, wheat, and roots are as good and clean as any that are to be seen in the Vale of Clwyd. The other farm, very similar in character

and size to this, comes nearest, however, to fulfilling all the conditions of the premium, particularly the two last, which are the most important, and to its tenant, Mr. Daniel Roberts, of Bithafara, near Ruthin, I most award the prize.

His farm contains 152 acres, 41 of which is in pasture, all of good character and clean; 29 meadow and seeds mown, and the after-growth very good; 13½ wheat, a thick crop well headed, and bright in straw; 46 acres of barley of average promise; 12 acres of swedes, healthy and clean, but patchy in places as most crops of swedes are this year; two acres potatoes, two mangolds, half carrots, three oats, and one beans. Seven acres in course of fallowing after clover mowed was being limed for wheat; 27 acres has lately been covered with a mixture of marl and lime; 300 yards of old fences eradicated, and 300 yards of new ones planted. Tenant has also repaired the road leading to his farm across another occupation at a cost of £40, and claims that he has brought the farm from a most foul and barren state, in which he got it seven years ago, into a state of cleanliness and fertility that is at least very commendable. The five-course system of cropping is pursued. About five tons of artificial manures and 70 tons of lime are used annually. All the hay, straw, and turnips are consumed on the farm. The stock kept consists of four farm horses, six colts and hacks, eight dairy cows, one bull, six bullocks, eight rearing calves, forty-five breeding ewes, and two breeding sows; all were of good character, and well adapted to the holding. The manure made on the farm by the stock is chiefly ploughed under, a course which it is always best to follow when it can be done in preference to using it as a top-dressing. Mr. Roberts has a very useful collection of farm implements. A new bullock-shed is just built, and the farm buildings are conveniently arranged, but the roof, and the roof of the house, require repairs that ought to be attended to forthwith. The farmyard and premises, watercourses, roads, gates, fences, &c., were in good keeping, and the kitchen garden and orchard in a clean and fairly productive state.

For the prize of £7, offered to holders of from 80 to 150 acres, under same conditions, there are three claimants. I awarded the prize, in my own mind, at once, upon inspection, to Mr. Thomas Jones, Glas Clwyd, Ruthin, and subsequent thought confirms the decision. His farm contains 130 acres, 26 of which is in pasture, 30 meadow and seeds, 24 wheat, 10 oats, 24 barley, 1 potatoes, 11 turnips, 1 mangel wurzel, 3 orchard, garden, homestead, &c. The grass in the pasture is of good quality and free from thistles. The wheat is a heavy crop, ripe, and in course of cutting. The oats a fair average crop. Barley variable; the best fields a full crop. Turnips good and clean, but a large patch of land had been largely cleared of plants by rooks. These birds and wood-pigeons are far too numerous in the Vale. The damage they do at seeding time is very great, and the loss they occasion the farmer at harvest time, by beating down the straw and stealing the grain, is more than is generally thought. The rook does some good by taking worms, and the wood-pigeon by gathering the seeds of some bad weeds, perhaps, but they exact high wages for their labour, and make such wanton waste in collecting that it is always very annoying, and when they alight on the fields in large flocks, as I frequently saw, it is simply ruinous. Most farmers would rather do without their help at any price, and both owners and occupiers should unite in effort to curtail their numbers largely. Mr. Jones' stock consisted of 4 horses, 1 colt, 7 dairy cows, 14 heifers and stirks, 7 rearing calves, 16 breeding ewes of the Shropshire breed, 2 breeding sows, and 4 store pigs. All hay, straw, and turnips are consumed on the premises. Five tons of artificial manure and ten tons of salt are used annually, and his account book showed that an average of 200 tons of manure had been carted on to the farm from the town of Ruthin within the last six years. This, with the manure made from the stock, keeps up and improves the fertility of the farm. Manure is the farmer's right hand, and the best evidence of a farm being well managed is the presence of large and well-cared-for middens and heaps of compost. The farmyard, stackyard, buildings and premises were in complete order, and the implements included a five-horse power engine and machinery for chaff cuttler, grinding corn, &c.; the roads, fences, and gates were good and neatly kept. Mr. Jones's fellow-competitors are doing well to their holdings, and both are good farmers. One has held his farm only three years, and in that time has made many improvements, but several more wait doing. The other is labouring under difficulties that would daunt any but the most industrious and

persevering man who was fond of his occupation. His buildings are old and insufficient, land detached, and much of it requires draining, but he manages to grow some good crops, and his hopeful and contented spirit is supported by capable and economical management, both indoors and on the farm.

The two claimants for the prize of £5 for farms above 80 and under 80 acres both reside near St. Asaph. One quotes his farm of 79 acres extent; the other 78½. Both are well managed, and a credit to their tenants. Of the two the first named is the best, and to the tenant, Mr. Edward Thomas, Penisa Waen, who holds under Mr. Whitehall Dod, I award the prize. He has 19 acres in pasture, and 14 meadow, in which were grazing eight dairy cows, 10 heifers, and about 80 ewes, and 50 feeding sheep; 23 acres were in wheat, eight of which were a fair crop, nearly ripe, and the other fifteen spring sown, somewhat lighter, and much later; seven acres of oats, a full crop, clean in the stubble, and sown with trefoil, which Mr. Jones finds succeeds as well or better than clover on his land; six acres of winter beans, a full crop, cut and stacked, were waiting a dry day to cart; nine acres of vetches after fallow had the look of a snatch crop, fairly full, but the land not over clean. The garden was neatly kept; house new but small, stands pleasantly, and is convenient. Buildings new, substantial, well arranged, and commodious. Stackyard and farmyard neat and clean, fences by the roadside trimmed, and the whole occupation in good order. Mr. Thomas has held the farm five years, and says he uses about £70 worth of artificial manure and salt, and 15 tons of lime annually; consumes all the hay and straw grown on the premises and lays more, and has subsoiled about eight acres. Subsoiling greatly improves strong soils devoted to tillage when well done and in the right season, and the application of salt in limited quantities, and frequently, as a top dressing, is a practice which giving experience recommends as most beneficial.

THOMAS RIGHT.

September 14th, 1877.

P.S.—The farms reported on were all inspected between the 22nd and 25th August.

BRIGHAM YOUNG'S WILL.—The latest American papers received contain the will of Brigham Young, which was read at Salt Lake, in the presence of all his wives and children. The estate is stated to be worth two million dollars. He leaves his property to be divided equally amongst his seventeen wives and fifty-six children, but sundry bequests are given to special favourites, notably his first wife, Amelia, to whom is given the Amelia Palace, a large and handsome modern building. The reading of the will was well received by the crowd of interested persons present.

LIGHTNING-KILLED CATTLE.—A correspondent of a morning contemporary calls attention to what, if his opinion may be relied upon, is certainly a rather stupid waste of good food. Healthy bullocks, he says, are not unfrequently found dead in the field after a thunderstorm, and these, it appears, are generally buried where they fall. If lightning-struck bullocks were sent to market it is said the butchers would not buy them, because the public would not re-purchase. A belief is prevalent, indeed, that the electric discharge renders the meat unwholesome. This, the correspondent referred to—Mr. Attfield, Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain—altogether disputes. Moreover, it frequently happens that sheep and cattle are killed indirectly by a thunderstorm. At Mitley, in Essex, says Mr. Attfield, a day or two ago three bullocks were found dead under an unstruck tree, and presenting no bruise or unusual mark on their bodies, "hence they had probably been killed by the concussion resulting from a suddenly and enormously expanded mass of air, expanded by the great heat attendant on some adjacent electrical discharge rather than by the electric force itself." Even if struck by the lightning, however, it amounts to nothing more than slaughter by a method which has frequently been advocated as a vast improvement on the pole-axe, and thus it would certainly appear to be a very unnecessary waste of valuable property to bury animals so killed. At all events, it seems clear that when the accident is discovered as soon as it has occurred, there is no good reason why animals that have been struck down by lightning should not be dealt with just as a living animal would be, and the meat as once prepared for the market.—*Globe*.

AGRICULTURAL SOCIETIES.

OXFORDSHIRE.

MEETING AT BANBURY.

This county Society is one of the most remarkable instances of rapid development that we have ever met with. On the catalogue it is mentioned as having been started in 1811, but till within the last three or four years—indeed, until last year, when the annual meeting was at the pleasant little Thames-side town of Henley—it was scarcely heard of outside the county. Now, however, it has taken a position as being one of the most important county shows in the kingdom. As some proof of its rapid progress and its present importance we may say that when it was at Banbury in 1868 there were 88 members, 94 entries of stock, 9 implement stands, and the amount given in prizes was £177 17s. At Oxford the next year there were 101 members, 100 entries of stock, 9 implement stands, and the amount of prizes was £177 2s. In 1870 there was no show. In 1871 Banbury was again visited, when there were 92 members, 111 entries of stock, 7 implement stands, and £196 7s. given in prizes. From that time, however, a new condition of existence appears to have been infused into the Society; for the annual meeting was held at Thame, Bicester, Witney, Chipping Norton, and Henley-on-Thames, each year showing an increase in every department, till last year there were 296 members, 358 entries of stock, 41 implement stands, and £677 7s. given in prizes. But even that success was greatly exceeded at Banbury last week, when there were 400 members, 635 entries of stock, 45 implement stands, and £1,074 offered in prizes, besides as many supplementary special prizes as will raise that amount to about £1,100. That advance certainly reflects credit both on the authorities of the Society and on the town of Banbury, for everything was done in a most liberal and energetic manner by the Local Committee, who raised £400 for the occasion, of which £250 was given in special prizes and the balance was spent in decorating the town and otherwise making a display to indicate a hearty welcome.

The Show-ground was on an elevated pasture besides the Oxford-road, and about a mile from the Cross. Cattle were honoured with the first position in the stalls, and although the prizes were offered for the best animal "of any breed," with the exception of one exhibitor and in the special classes for Channel Islanders, the animals were all Shorthorns. But this exceptional breeder, who had the confidence to send some of his Herefords to compete in classes that were sure to be mainly filled with first-class Shorthorns, has probably commenced a turning-point in county Shows, particularly in such districts as the Midland and Western counties, where Hereford cattle do most abound. This exceptional exhibitor was Mr. W. Taylor, Showle Court, Ledbury, whose name will be found in our prize list as the winner of the second prize in Class 1 for aged bulls, and as the winner of the 1st in Class 3 for yearling bulls. When we say, too, that the judges were Shorthorn men and near neighbours, and at the same time as nearly of one mind about cattle, and particularly Shorthorns, as two men can well be, this triumph is all the greater. Sir Arthur Ingram was placed first, but his size and form are so well known by this time that it would be superfluous to go over his quality and points. Tredegar was the name of the Hereford that was placed second to him and a grand specimen, at four years of age, of the white-face he is. A strong class was in competition, as will be seen when we say the highly commended animals were Mr.

Bland's Waterloo 2nd (the reserve number); Mr. Woodhouse's Royal Havering 3rd; the Marquis of Exeter's Son of Telemachus; and the commended animals, Mr. Griffin's Telemachus 10th; Mr. Hopkin's D. of St. John's, and Mr. G. Garne's Prince Puck. In the two-year-olds the Earl of Malmesbury's Attractive Lord was again distinguished above his fellows in the yard, for he was awarded, in addition to the first in his class, two £10 special prizes, and a £5 champion prize, beating Mr. Bland's General Fusces and other good bulls. In the yearlings, as we have intimated, a Hereford, Telescope, son of Tredegar above mentioned, was placed first in a strong class of 19 Shorthorns, Mr. Bland's General Flirt, Mr. Willis's Bear Admiral (the reserve number), and several other first-class animals being in competition with him. Mr. Willis's calf, Vice Admiral, was first, and from his extraordinary likeness to his brother, Bear Admiral, it seems that his sire, Admiral Windsor, is likely to establish a family in the same way as the original Telemachus has done.

The cows were 20 entries, but they were not a very prime collection. Mr. Griffin's heifer, Blushing Rose, sire Telemachus 2nd, has grown wonderfully thick—too thick for a class of breeding animals—which is as much as to say the sooner she is put on plainer food the better it will be for her future career, both as a Show animal and a breeder. Mr. Mumford's Country Lass has grown over-patchy for a young one from over-feeding; and Lady Pigot's Imperious Queen, which calved early this year, and is reported to be in calf again, has gone very much "all to pieces." In the calves Mr. Acker's 3rd Lady Carew, a 6 months' calf, was again present, and looked more than ever like being a second Lady Mary as a prize-taker. She was first at Banbury, beating Innocence, daughter of Telemachus 3rd, 11 months of age.

The success of Mr. Woodhouse in Class 9, for bull, cow and offspring, was a surprise, particularly as the Marquis of Exeter's Telemachus 6th, Queen of Ithaca, and Telemachus were in competition. But then there is a strong prejudice among some pedigree men against the Telemachus family, although they are a grand tribe as they stand.

The £5 prize for dairy cows brought out 25 entries from the other classes, and the prizes for pairs brought out 10 couples, many of which had appeared in the previous class; but the second prize was taken for the best pair of Guernsey cows that we have seen for a long time. The other classes for Channel Islanders were of interest to local breeders and amateurs, but they were not of much public consequence.

The horses were a great show for a county which has no hcrey reputation. The hunters and "miscellaneous" classes of hacks, nags, cobs, and ponies were shown in 19 classes. However, although the Show was a good one it was of local rather than general interest.

The agricultural horses, however, were worthy of some attention. Mr. Wynne's dapple-grey mare, Queen of Tramps, is very compact and powerful, and she has the largest neck in proportion to her size that we ever saw on a mare; while Mrs. Humphries' grey gelding looked larger and larger the longer he was looked at and the closer he was inspected. He is a good-looking horse of great power, in a compact form. Mr. Russell, Lower Shuckburgh, sent two capital old-fashioned brown mares that are exactly adapted for a hilly country. Boany, 10 years old, was the dam of Rose, six years of age. There were some capital mares and foals, also geldings, fillies, and colts. Among the two-year-olds Mr. Parson's

first was an extra good one. This animal beat the Royal winner at Brackley, was first at Burleigh in 1876, and ditto at Banbury at the last spring show.

The entire cart horses were ten entries, eight of which were good ones. Mr. Wynne's Nonpareil is a compact, active, and powerful bay that is fit to stand first in any company, and Mr. Jackman's Young Basilton, a five-year-old black roan, was good enough to stand second anywhere, and first, too, in most places.

The sheep were a great show of 113 entries that were divided into seventeen classes. As, too, there were eight classes in which five sheep were shown in each lot, and two classes in which pairs of ram lambs were shown, it will be seen the sheep were far more numerous than the 113 entries appear to make them. Oxfordshire Downes were the leading breed. Mr. Drue took the special and champion prizes with his excellent sheep Campsfield, that beat everything at Bath, and has won so many prizes elsewhere. The classes for "Shropshire or other Downes (excepting Oxfordshire)" brought out some good Shrops and Hants, but there were no Southdowns shown. The Shrops had the best of it in the yearling rams, but the first in pairs of yearling rams went to the Hants, Mr. Baker, Moor Barns, being second. In the ewes that had bred lambs this year, too, the first went to Hampshire and the second to Shropshire, which was the case, and to the same breeders, in the yearling ewes, but in the latter instance Messrs. Palmer took the champion prize for an extraordinary pen of young ewes. Some classes for long-woolled sheep, which were all Cotswolds, completed a capital show. The awards will be found below.

The pigs were a failure as regards numbers, and the few present were but middling. There were only 16 entries, and half of them did not put in an appearance.

The leading implement makers were represented generally by Mr. J. P. Barford, Banbury, who had a very large stand of machinery and implements.

PRIZE LIST.

JUDGES.—CATTLE, SHORTHORNS, &c.—C. Howard, Biddenham, Bedford; J. Robinson, Clifton Pastures; G. W. Baker, Laton Hoo, Beds; W. Champion, Whitley, Reading. Jersey and Alderney.—H. Middleton, Cotteslowe; H. Tait, Prince Consort's Farm, Windsor. HORSES.—Hunters and Nags.—J. E. Bennett, Teddington, Rugby; E. Knott, Penny Compton; R. Tompkins, Reading. Driving horses.—Viscount Valentia; Lord Norris; Algernon Rushton, Esq. Jumping.—Earl of Jersey; the Right Hon. Willoughby de Broke; Holford C. Risley, Esq. Agricultural horses.—J. Kirby, South Moreton, Wallingford; F. Street, Somersham Park, St. Ives. SHEEP.—R. Garne, Aldsworth, Northleach; C. Randall, Chadbury, Evesham; G. Street, Maulden, Ampthill. Pigs.—H. Middleton, Cotteslowe; H. Tait, Prince Consort's Farm, Windsor. BUTTER.—O. Grimby, Oxford; H. Warland, Oxford.

CATTLE.

Bull of any breed, three years and upwards.—First prize, £15, W. Linton, Sheriff Hutton, York (Sir Arthur Ingram); second, £10, W. Taylor, Showle Court, Ledbury, Hereford bull (Tredegar).

Bull of any breed, two years and under three years.—First prize, £15, the Earl of Ellesmere, Shorthorn (Attractive Lord); second, £10, T. H. Bland, Market Harborough (General Fosse).

Bull of any breed, one year and under two years.—First prize, £15, W. Taylor, Hereford bull (Telescope); second, £10, T. H. Bland (General Firt).

Bull calf of any breed, six months and under one year.—First prize, £10, T. Wallis, roan Shorthorn (Vice-Admiral); second, £5, R. Stratton (Carbuncle).

Cow of any breed (having already produced a calf), in milk or in calf, of three years and upwards.—First prize, £15, Marquis of Exeter (Telemacina); second, £10, T. Kingsley, Boar's Croft, Tring (Seraphina 6th).

Heifer of any breed, in milk or in calf, two years and under three years.—First prize, £15, C. W. Griffin, Werrington, Peterborough, Shorthorn (Blushing Rose); second, £10, J. A. Munford, Thame (Country Lass).

Heifer of any breed, for breeding purposes, one year and under two years.—First prize, £15, Earl of Ellesmere, Shorthorn (The Lady); second, £10, Lady Pigot, Shorthorn (Victoria Lucida).

Heifer calf of any breed, six months and under one year.—First prize, £10, B. St. John Ackers, Shorthorn (Third Lady Carew); second, £5, G. A. Ashby, Naseby Woolley, Ragby (Innocence).

Given by R. W. Harcourt, Esq., for the best bull, cow, and offspring (latter under twelve months).—Prize, £10, W. H. Wodehouse (Countess).

Best dairy cow of any breed, a good supply of milk to be the chief qualification.—Prize, £5, H. T. Sotham.

Specially adapted for dairy purposes. Pair of cows in milk, four years and upwards.—First prize, £10, H. T. Sotham, Water Eaton; second, £5, W. E. Fitt, Kerrfield House, Winchester, Guernsey (Playful and Lilly).

Pair of cows or heifers, under four years, in milk.—First prize, £10, S. Smith, Somerton; second, £5, J. Hunt, Water Eaton.

Pair of steers, under 4 years, the property of a tenant farmer.—First prize, £10, F. Sellers, Broughton, (Shorthorn); second, £5, W. H. Austin.

Pair of steers, under 2½ years, the property of a tenant farmer.—First prize, £10, F. Platt, Sugwas-court, Hereford; second, £5, H. W. Abbot, Bodicote, Banbury.

Jersey and Alderney bull, over 1 year and under 3 years.—Prize, £10, G. Simpson.

Jersey and Alderney cow in milk or in calf, 3 years and upwards.—First prize, £10, G. Simpson, Beigate, huss Jersey (Lana); second, £5, G. Simpson, Lavn Jersey (Pretty Maid).

Jersey or Alderney heifer, under 3 years.—First prize, £10, G. Simpson, silver-grey Jersey (Venus); second, £5, G. Simpson, silver-grey Jersey (Milkie).

CHAMPION PRIZES.

Best horned animal in the yard.—Prize, £5 6s., Earl of Ellesmere (Attractive Lord).

Best bull in the yard, £10; best cow or heifer in the cattle classes.—Prize, £10, Earl of Ellesmere (The Lady).

Shorthorn bull, qualified for Herd Book entry, in Class 2 or 3.—Prize, £10, Earl of Ellesmere (Attractive Lord); best Shorthorn heifer, qualified for Herd Book entry, in Class 6 or 7.—Prize, £5, Earl of Ellesmere (The Lady).

HORSES.

HUNTERS.

Brood mare for breeding hunters.—Prize, £5 6s., A. Robertson, and foal, 15 years.

Brood mare for breeding hunters, the property of a tenant farmer.—First prize, £10, A. R. Howland, Lodeham, Thame; second, £5, F. Dandridge, Northcourt, Abingdon, with foal.

Mare or gelding to carry at least 15 stone.—First prize, £15, W. Whitehead, Wollerton; second, £10, H. Ford, Leamington.

Mare or gelding to carry at least 15 stone, the property of a professional gentleman, tenant farmer, or tradesman, living within 15 miles of Banbury.—First prize, £10, T. Fowler, Banbury; second, £5, B. Bliss, Wardington, Banbury.

Mare or gelding to carry at least 13 stone.—Prize, £10, J. M. K. Elliott, Green's Norton Hall, Towcester.

Mare or gelding to carry at least 13 stone, the property of a professional gentleman, tenant farmer, or tradesman, living within 15 miles of Banbury.—First prize, £10, T. East, Middleton Cheney; second, £5, J. Harbage, Barton Hill, Leamington.

Mare or gelding, to carry at least 13 stone, under 5 years.—First prize, £10, J. Harbage, Moreton-in-Marsh; second, £5, J. M. K. Elliott.

Mare or gelding of 5 years and upwards, to carry at least 13 stone, the property of a tenant farmer.—Prize, £10, W. Whitehead.

CHAMPION PRIZES.

Hunter, under 5 years.—Prize, £10, J. Harbage, Barton Hill.

Mare or gelding that shall jump in the best form, the property of a tenant farmer.—First prize, £10, R. Gerring; second, £5, J. Hatt.

AGRICULTURAL.

Best gelding or filly, above 4 years old.—First prize, £10, W. Wynn, Stratford-on-Avon (Queen of Trumps); second, £5, E. Humphries (Brown Prince).

Mare with colt, or in foal this season.—First prize, £10, J. Anderton (Poppet); second, £5, J. P. Chapman, Woodcote, with colt.

Gelding above 2 and under 4 years.—Prize, £10, W. Barber, Congerstone, Atherstone.

Filly above 2 and under 4 years.—First prize, £10, H. Warland, Oxford; second, £5, E. and A. Stanford, Eatons, Ashurst, Essex.

Colt or gelding, not over 2 years.—First prize, £10, C. Marsters, Saddlebow, King's Lynn; second, £5, J. Hawkes, Farnborough.

Filly, not over 2 years.—First prize, £10, J. E. Parsons, Charvelton, Daventry; second, £5, J. B. Owen, Hungerford.

Native cart horse.—First prize, £10, W. Wynn, Stratford-on-Avon; second, £5, W. Jackson, Brill (Young Basilidon).
Pair of draught mares or geldings, or mare and gelding, which shall have been employed *bona fide* in agricultural work before January 1st, 1877, and which continue to be so employed at the time of show; animals entered in other classes compete.—First prize, £20, E. Humphries, Parahore; second, £10, T. Russell.

SHEEP.

Oxfordshire Down shearing ram.—First prize, £10, and second, £5, J. Treadwell, Upper Winchendon.

Oxfordshire Down ram of any other age.—First prize, £10, A. F. M. Druce, Eynsham; second, £5, Z. W. Stilgoe, Adderbury.

Best ram in Classes 45 or 46.—Prize, £4 4s., A. F. M. Druce.

Pair of Oxfordshire Down ram lambs, born in 1877.—First prize, £7, A. F. M. Druce, Eynsham; second, £3, the Earl of Jersey.

Pen of five Oxfordshire Down shearing ewes.—First prize, £10, A. F. M. Druce, Eynsham; second, £5, A. Brassey, Heythrop Park.

Pen of five Oxfordshire Down ewes, having bred lambs in 1877.—First prize, £10, A. Brassey; second, £5, A. F. M. Druce, Eynsham.

Pen of Oxfordshire Down ewe lambs, born in 1877.—First prize, £10, A. F. M. Druce, Eynsham; second, £5, A. Brassey.

Pen of five Oxfordshire Down shearing wethers.—First prize, £10, A. Brassey; second, £5, N. Stilgoe.

Shropshire or other Down (except Oxfordshire) shearing ram.—First prize £10, H. J. Sheldon, Brailles House (Shropshire Down); second, £5, Mrs. Smith, Sutton Maddock, Salop.

Pair of Shropshire or other Down (except Oxfordshire) ram lambs, born in 1877.—First prize, £10, A. J. and T. Palmer, Cliddesden, Basingstoke; second, £5, Mrs. Smith, Sutton Maddock, Salop.

Pen of five Shropshire or other Downs (except Oxfordshire) ewes, having bred lambs in 1877.—First prize, £10, J. A. and T. Palmer; second, £5, Mrs. Smith, Sutton Maddock.

Five Shropshire or other Down (except Oxfordshire) shearing ewes.—First prize, £10, J. A. and T. Palmer, Cliddesden Basingstoke; second £5, Mrs. Smith.

Pen of five short-woolled ewe lambs.—Prize, £5, R. F. M. Druce.

Longwoolled shearing ram.—First prize, £10, J. Gillett, Oaklands, Chislebury; second £5, R. Swanwick Royal Agricultural College Farm.

Long-woolled ram of any age.—First prize, £10, G. Smith, Somerton; second £5, R. Swanwick.

Pair of long-woolled ram lambs, born in 1877.—Prize, silver cup, value £10 10s., J. Gillett, Oaklands.

Five long-woolled shearing ewes.—First prize £10, J. J. Godwin, Somerton; second, £5, S. Smith, Somerton.

Five longwoolled ewes, having bred lambs in 1877.—First prize, £10, R. Swanwick, Cirencester; second £5, E. H. Raynbird, Basingstoke.

Pen of five long-woolled ewe lambs, born in 1877.—First Prize, £5, and second £4, J. Gillett, Oaklands.

Pen of five long-woolled ewe lambs.—Prize, £5, J. Gillett.
Ram of any age or breed.—Prize, £10, A. F. M. Druce.
Pen of five shearing or aged ewes, of any breed.—Prize, £5, J. A. and T. Palmer.

PIGS.

ANY BREED.

Boar not exceeding 18 months.—First prize, £7, H. Humphrey, Shrivenham.

Sow in farrow or with pigs.—First prize, £7, H. Humphrey; second, £3, Ven. Archdeacon Holbech, Berkshire breed with pigs.

Berkshire boar, not over 18 months.—First prize £7, and second £5, H. Humphrey.

Berkshire sow under 18 months in farrow or with pig.—First prize £7, H. Humphrey; second £3, R. Fowler, Broughton, Aylesbury.

Not for competition.—R. C. Humphry, Banbury, two pigs Indian breed.

Best boar in the yard.—Prize £3, H. Humphrey.

AS PATRIA.

The ninth annual exhibition of this Society was held at Aspatria, on August 30, and was a better Show than that of last year. The Shorthorns fell off somewhat in the number of entries, but were a fair average in respect of quality, the heifers and cows being quite up to the mark. There was a good show of horses, sheep, and pigs. The weather threatened to be wet, but "cleared up," as the day advanced, and there was a good attendance.

C R A V E N.

The twenty-third annual exhibition of the Craven Agricultural Society was held on August 31 at Skipton. Last year the Show was not held as usual, in consequence of the Great Yorkshire visiting the district. In 1875, however, the exhibition proved to be one of the most successful the Society has ever had, the entries being large, but this year there was a falling off in the number of entries, the decrease being especially observable in the horse department. Unfortunately the weather during the whole of the day was of the most unfavourable kind. In the cattle department of the Show there was an increase of 25 in the number of entries, the animals exhibited being of excellent quality throughout. The Shorthorned cattle, open to the United Kingdom, were a very good lot. In the class for bulls, two-years-old and upwards, Mr. Linton's "Sir Arthur Ingram" took the premier award, thus adding another to its long list of laurels. Amongst the yearling bulls a son of "Sir Arthur Ingram," though deserving of high commendation, was defeated by "Alfred the Great," the property of Mr. W. Handley, Milnthorpe. Lady Pigot, West Hall, Weybridge, Surrey, was an extensive exhibitor, and carried off the premier awards in the bull calf, cow in calf or milk, and yearling heifer classes. A silver cup, of the value of £31, was offered for the best collection of Shorthorns of not less than three in number. The issue of the contest lay between Mr. W. Linton's and Lady Pigot's collection. The former showed "Sir Arthur Ingram," "Fitz-Arthur," and "Carnation II.," whilst Lady Pigot's collection included "The Beau," "Nobolis," "Imperious Queen," "Victoria Lucida," "Rosalba," and another. Owing to a weak point in "Carnation II.," the judges awarded the prize to Lady Pigot's collection. The cattle belonging to the tenant-farmers in the district reflected great credit on the exhibitors. In this department the £10 10s. silver cup for the best collection of Shorthorns fell to the lot of Mr. B. Fleteber, Carlton, Yeadon, Leeds. Amongst the horses there was a falling off of 57 entries, though the quality of the exhibits, was, as usual, of a superior order. The roadsters and draught stallions and brood mares were especially commendable. Geldings, fillies, and ponies were also well represented. Among the hunters and leapers were several well-known prize-takers, many of whom had competed against each other at previous Shows. Sheep, though not numerous, were a good show. A number of rooks were exhibited, but generally they were of an inferior character, owing to the lateness of the season. In the pig classes there was a great falling off in point of quality, the Show being about one of the worst the Society has ever had. Amongst the sows of the large breed there were three entries, but in consequence of

their inferior character, the judge declined to award a prize.

The following table will show the list of entries since 1874:—

	1877.	1876.	1874.
Cattle	118	98	98
Horses	133	190	241
Sheep	115	131	128
Pigs	56	71	85
Poultry and pigeons	248	241	258
Roots	41	64	44
Dogs, &c.	168	123	183
Implements	110	89	97
Total	989	1,005	1,129

—Abridged from the *Leeds Mercury*.

LEOMINSTER.

The seventh annual Show of horses, cattle, sheep, and pigs was held at Leominster, on Aug. 4. The Show has continued to increase in importance since its establishment in 1871, and seeing the position that it has this year attained as a local exhibition of stock, it is by no means surprising that those who have been instrumental in establishing it and carrying it on with so much success should look with a degree of suspicion on any step that might appear to tend to interfere with its progress and its existence as a purely Leominster institution. The Show this year showed an increase in all departments as compared with that of last year, while in some classes the improvement was very noticeable. The arrangements in all respects were very satisfactory, and all those engaged in carrying them out are to be congratulated upon the success which attended their exertions. With regard to the cattle it is also needless to state that they very fairly represented the famous Hereford breed, while some of the principal prize-takers would bear comparison with the best of the kind. The first prize, however, for the best bull, cow, and offspring went out of the county, it having been awarded to "Grateful," "Fairmaid" and "Fancy," the property of Mr. Aaron Rogers, of the Rodd, Presteign. The bull "Grateful" took the first prize in his class at the Shropshire and West Midland Show, at Whitechurch, this year, and also the special prize as the best Hereford bull in the yard. Mr. Pries, of Pembridge, was again a prominent exhibitor and principal prize-taker, as will be seen by the prize list. Mrs. Edwards, of Leominster, also maintained her reputation as a prize-taker. The heifers "Leonora" and "Beatrice," which were so much admired at the Hereford Show, attracted considerable notice here; and "Leonora," with "Beatrice," not only took the prize for the second best pair of heifers calved since the 1st of March, but also the special prize for the best beast in any of the classes. Some of the classes, it must be admitted, were not so well filled as could be desired, but all the beasts exhibited showed unmistakable quality. The sheep and pig classes were small, but showing no decrease as compared with last year. There were altogether 30 entries in the sheep classes, and some very good pens of Shropshire and other breeds were exhibited. The classes for horses were very fairly filled, and it is almost impossible to speak in too high praise of the animals shown. To begin with Class 27, the horses were not, perhaps, as a class, above what might be termed ordinary, as they did not show up so well on the ground as they might have done, but they were, probably, a very good lot of animals; Class 28 included, however, a really very fine lot of hunters, but three of the noble animals were especially admired. They were Mr. Nelson's "Spoon Stealer," Mr. Stevenson's bay gelding, and Mr. J. Stuart Mason's black gelding "Exchange." The first prize was awarded to "Spoon Stealer," but of the two Mr. Stevenson's bay was undoubtedly the best mover on the ground, the drawback in him being a bad hook. Out of 15 entries in the class, 13 put in an appearance, and the whole class was highly commended by the judges. The class, beyond doubt, deserved the fullest commendation, for it is seldom that such a splendid lot of hunters are shown at any show, and especially at a local show. In Class 29 cobs were very well represented, but out of the five entered only three showed up. Two of them were exceedingly pretty animals. The nag mares and colts and yearling geldings and fillies also showed up very well; and there were some very fine cart

geldings and mares exhibited. In the class for entire horses for agricultural purposes there were four entries. The prize went to "President," the property of Mr. Hyde, of Bodenham. The jumping trials took place as usual in a field adjoining the Show-ground. There were five obstacles to be got over, including gorse hurdles and water jump at the finish. In the classes very good work was done, taking the trials altogether, but both in Class A and Class B nothing could approach Mr. Lovejoy's gray gelding, "The Alert," as an all-round fencer. He stopped at nothing, and cleared the water jump, which of course was the principal test, in splendid style. The nearest thing to him was Mr. R. C. Bolton's "Sir George," who did his work very well. In Class C Mr. Bedford's "Little Officer," and Mr. Yeld's "The Doctor," fenced very well. Mr. Vaughan Gallier's (Brampton Bryan) bay pony, "Repentance," struck his knees against the gorse hurdles at the water jump, and pony and rider (Peter Stephens) had a "regular cropper." Stephens was stung, but soon came to, and, with this exception, everything passed off without a hitch.—*Hereford Times*.

LYTHAM AND KIRKHAM.

This Show was held at Kirkham, on August 29, and was as successful as the Shows at that place generally are. There was a fine lot of horses, great attention having been recently paid in the district to horse-breeding. Cattle, sheep, and pigs were not numerously represented, but there was a good show of poultry.

STAFFORDSHIRE.

This annual Show opened with most favourable weather at Barton on August 4. The Show, as is now the case with the Derbyshire exhibition, occupies two days:

On the first day the poultry formed the most attractive feature. They were more numerous than in previous years, and the quality was excellent, the rarity of birds without merit being a very striking feature of the Show. There were 220 entries in the 29 classes, and in addition to the prize the cards recording commendation were in great request.

The exhibition was continued on Wednesday when the whole of the departments were open to the public.

The stock entries this year were as follows:—Cattle, 108 Horses, 190; Sheep, 65; Pigs, 50; extra stock, 19; Poultry, 290 total, 577, as compared with 97 Cattle entries, 133 Horses 57 Sheep, 54 Pigs, 25 of extra stock, and 230 of Poultry—total, 586, at the exhibition at Stone twelve months ago.

The exhibition of Cattle was, as a whole, remarkably good, for though there were no animals entered of national celebrity there was a splendid competition of what may be regarded as representatives of the stock bred by the principal agriculturists of the districts for the benefit of which the Society exists. Particularly was this the case in the classes for dairy stock, which formed a collection such as is seldom surpassed at a local Show, and which were creditable to the county in a high degree. Space forbids us entering into a detailed description of the classes, and we must, therefore, content ourselves with noticing a few of the most prominent features. The cow and heifer classes were particularly good. "Maid of the Mist," the first prize cow—exhibited by the Rev. W. Sneyd, of Keele Hall, Newcastle—in form, coat, and colour, well deserved the universally-voted epithet of "beautiful." Mr. Ward's "Welcome Dawn," which gained the second prize, was likewise meritorious, as was also a very large cow exhibited by Mr. W. T. Carrington, of Croxden Abbey, Uttoxeter. The latter, which the judges highly commended, has been among the winners of first prizes at the Smithfield Show. Mr. Carrington was the only exhibitor of heifers in pairs, in calf or milk, and took both prizes with exhibits which well deserved the honours accorded to them. In the class for heifers in pairs, under two years old, there was more competition. There were five entries made by the Rev. W. Sneyd, Mr. W. T. Carrington, Mr. H. Ward, of Barton-on-Trent, and Mr. C. E. Lyon, Eccleshall. Mr. Sneyd fairly won the first with a most beautiful pair, but neither of the other stalls was passed uncommended by the judges. Mr. Gervase Wood, of Croxden Abbey, showed a promising young bull, and the pair of cows under four years shown by Mr. T. Carrington were pro-

ming animals. Sir J. H. Crews, Bart., was the exhibitor of a notably fine bull, of the true Longhorn type. The Longhorn cows and heifers in pairs, shown by Sir J. Harper Crews and Mr. R. Hall, of Walton, were remarkable. Among the fat cattle, however, Sir John Crews showed a leviathan Longhorn ox, which formed one of the most interesting features in the department. There were some good fat heifers, and in the extra stock class an ornamental cow (half-bred Indian horn bull and Brahma cow), shown by Sir J. Hardy, Bart., attracted considerable attention. The prizetakers for Shorthornes include Mr. W. T. Carrington, of Croxson Abbey, who took 2nd for yearling bulls, 1st and 2nd for heifers in pairs in calf or milk, and 2nd for heifers in pairs under two years old; Mr. H. Wards, of Highfield, Barton, took the 2nd prize in Class 4 for cows. The local prize-winners in the classes of dry breed for dairy purposes, were Mr. Gervase Wood, Uttoxeter; Mr. W. T. Carrington, Uttoxeter, Mr. J. Bestwick, Barton; Mr. W. Lovelock, Horninglow, and Mr. G. Bagnall, Draycot, Barton; Sir J. H. Crews, Bart., obtained the first prize for Longhorn bulls, and Mr. R. Hall, of Walton, the second. Mr. Hall also obtained prizes for heifers in calf or milk, and for animals under two years old. Sir J. H. Crews was first for a Longhorn ox, and Mr. R. Ratcliff, Barton, second, for fat cow or heifer. A medal was awarded to Mr. M. T. Bass, M.P., for extra stock.

There was a large and fairly good show of sheep, the local prize winners being Mr. G. Gorman, Normanton-le-Heath, and Mr. E. Johnson, of Kirk Ireton (1st and 2nd for Leicester or long-wooled ram).

In the Pig Department the Show was remarkably good, both in extent and quality, the pigs of small breed being entitled to the highest commendation. Mr. Matthew Walker, of Chaddesden, took the first prize for boar of a large breed, and the second for boar of a small breed. Mr. J. Langley, of Mickleover, was first in the class for boars of Berkshire breed, and second for breeding sows of the same kind. The other prize winners were Mr. C. Miles, Tatenhill; Mr. F. N. Copeland, Barton; Mr. S. Walker, Tisbury; Mr. T. Warren, Beeston; Mr. J. King and Mr. T. Hudson, both of Barton.

The classes for Horses, although not so well filled as they were at the last Show, were sufficiently interesting, and the exhibits, taken as a whole, may be pronounced of decided merit. The prize of £50 and the Society's silver medal for an entire agricultural horse, was taken by "Lord of the Manor," 6 yrs., the property of Mr. John Nix, of Alfreton. The animal is a handsome and shapely roan, powerfully built. Class 41, mare and foal, secured a varied lot of entries, decidedly the best being Mr. John Brandon's (Stone) exhibit, to which was awarded first prize; whilst Mr. Thomas Lowndes, of Ashbourne, with a good black mare and promising brown foal, came second. There was a good show of geldings or mares in pairs in Class 42, the Stonebrough Colliery Co., of Rawton, Cheshire, securing premier honours, and Sir John Hardy, of Barton-on-Trent, second. Mr. J. L. P. Barber, of Barton, showing a handsome pair, which were awarded the reserve and. The only exhibits of dray geldings or mares were made by Messrs. Bass and Co., who sent three magnificent couples, and were deservedly awarded both prizes offered. Mr. John Hobbly, of Twyford, Derby, took first prize for two-year-old geldings, with a small grey; and Mr. Robert Ratcliff, of Burton, came second. In the class for two-year-old fillies Mr. A. Tomlinson, of Derby, was placed first, with a promising grey; and Mr. James Hawksworth, of Derby, second, with his "Beauty." Mr. Hawksworth came first in the next class, for yearling geldings or fillies; and Mr. S. Wade, of Derby, second. The hunters' classes were also well filled, and much merit was apparent in many of the animals.—Abridged from *The Derby Reporter*.

TODMORDEN.

The eighth annual meeting of this Society took place on September 1, at Sandholme. The day opened with alight showers, but as it advanced the weather improved, and eventually turned out all that could be desired, although the rain which fell during the preceding days rendered the grounds unpleasant. The entries amounted to nearly 1,100, which were slightly below those of last year, but the falling off in that respect was chiefly amongst the less important sections, and upon the whole the stock exhibited was up to the highest standards of other years. As usual, the judg-

ing contest excited the liveliest interest, and the horse which took the first prize did its work in the neatest manner possible.—*Leeds Mercury*.

WIRRAL.

The thirty-fifth annual Show of this Society was opened on Sept. 6, at Bidston. The element of weather was favourable enough throughout the hours when any fall of rain might have interfered with the success of the Show, and there was only one circumstance to which the attendance during the early portion of the day may have pointed, namely the concurrence of the Liverpool Festival, which it appears the committee found it impossible to avoid by a change in arrangements made so early as March. The effect of the exodus to the Lancashire side of the river of large numbers of the residents of Birkenhead and neighbourhood was observable in the Show-yard from ten o'clock, the opening hour, to about two p.m. Later in the afternoon this contrast with last year's attendance became reversed, for the total receipts of the day up to six p.m. appear to be in excess of those of the first day of last year's Show by £96. The general arrangements were excellent, and in the absence of rain, which last year gave a monopoly of mud to portions of the ground, the pleasure and comfort of visitors were at their highest. In number of exhibitors, as well as in aggregate excellence, the Show was superior to that of last year, and included more than 1,000 specimens in the different departments. The display of horses was unusually good, the local competitors being well represented. The specimens shown in the agricultural class were fully up to, sometimes surpassing, the average of excellence by which the Show has hitherto been distinguished in this department. There was a tolerably brisk competition in the class confined to the Society's district, Mr. Charles Cogswell, of Eastham, Mr. J. J. Houghton, of Neston, and Mrs. M. Stanley, of Seughall-Massin, bringing away first prizes for really fine animals. In the open competition hunters were well represented, as well as horses for draught, agricultural, road, and field purposes. Mr. Thomas H. Jackson, of Birkenhead, took two awards for best hunters, up to carrying 16 stone. There was a large show of roadsters, a first prize in which department fell to Mr. W. Townson, of Liverpool. The Rev. P. Robin, of Birkenhead, showed the best filly under two years. There was considerable competition for the prize for the best harness horse driven on the ground in carriage. The cattle were numerically superior to that of last year. The show of bulls and heifers included fine beasts in both classes, the principal local exhibitors being Mr. L. Macliver, M.P., Mr. J. Russell, Mr. C. Cogswell, Mr. J. J. Houghton, &c. There were the usual displays of Channel Island cows, Shorthorn bulls, and Shorthorn heifers, with occasional excellence in all of these classes. In sheep, as well, the same numerical superiority is observable, with competition well distributed and of average briskness throughout the various classes. There was a marked falling off in the number of pigs exhibited, as compared with last year's display. The exhibitors concerned in an unusually large display of grains and roots principally represent the Society's district, the open competition in this department not being exceptionally brisk. For butters and cheese the entries were nearly twice as numerous as on the last occasion.—*Chester Chronicle*.

CARLEW.

The thirty-second annual Show of the Carlew Agricultural Society was held at Bagenalstown on Sept. 6 in a field convenient to the town. In its most important features the Show compared favourably with those of former years, save in regard to the number of entries, in which there was, as compared with last year, a great falling-off; that, however, is accounted for by the fact that the Society celebrated its annual meeting last year in Tullo—*a district celebrated for its stock-breeding*. The entries on that occasion reached 356—the largest number ever received; while at the previous Show, which was held at Carlew, the entries numbered 294, and, as contrasted with it, this year's Show only showed a decrease of 6. The Society evinces a sound appreciation of the objects of their displays in holding them in Carlew, Tullo, and Bagenalstown in successive years. It has the double effect of popularising the Society and of meeting the convenience of the industrious tenantry, who can hardly spare the time at this season of the year to take their cattle to a

distant part of the country for purposes of exhibition. In point of quality the animals exhibited at this year's Show left very little to desire. Several of the sections—notably those for cattle in the first, second, and third class—contained a number of really splendid animals. The Society's challenge cup for the best meat-breeding animals was won by Mr. T. J. M'Clintock, Banbury. A very valuable challenge cup, presented by Mr. James Smith, Little Moyle, for the best breeding animal in the yard, to be competed for by tenant-farmers only, was awarded to Mr. Peter Salter, for an animal bred by Mr. Smith. The sections for sheep and pigs were well filled, and the average merits of the exhibits was quite in keeping with that of the other sections. There was a good display of butter, poultry, and farm produce. Several stands of implements were exhibited. The weather was most favourable, and large crowds of people from the surrounding district visited the Show-yard during the day. The judges were:—Mr. Bloomfield, Mr. Michael Kelly, Mr. Webster, and Mr. James Smith.—*Irish Farmers' Gazette.*

W E X F O R D .

The annual cattle Show of this Society was held on Sept. 4, at Enniscorthy, on the new Fair Green adjacent to the town. The Green itself has a wild appearance, and the outskirts of the town, by which it is flanked, looked as if they wanted a wave or two of the wand of progress over them. However, elements of hopefulness were afforded by the Show, which was one of the best the Society ever had, especially as regards the quantity of the stock; and the more weight is due to this fact when it is borne in mind that the Show is very much one for the farming class. The total number of entries was about 230; the horses numbering over 30, the horned cattle nearly 80, and the sheep nearly 60. The following gentlemen acted as judges:—Messrs. James H. Jones, D.L., Mullinabrona; Charles G. Gray, Enniscorthy; and Charles Davidson, New Ross.

A I R E D A L E .

The eleventh anniversary of the Airedale Agricultural Society was celebrated on August 29, by the holding of the annual exhibition of farming stock, &c., in the Park at Myrtle Grove, Bingley. It will probably be remembered that last year the financial success of the show was greatly marred by the inclement weather, the decrease in receipts compared with those of 1875 being no less than £160. Nevertheless, after paying all expenses, there was a balance in hand of £40, a sum which, without doubt, will have been considerably increased when the receipts for the present show are made out. The weather yesterday was an agreeable change to that experienced for the past few days. The sun shone out brightly throughout the whole of the day, tempting many thousands of people to visit the show-ground from the various towns and villages in the district. Since the establishment of the Society the numbers of entries in the various departments have gradually increased, until last year they amounted to 1,124. Upon the latter number yesterday there was a falling off of 75, the decrease principally being in the dog department. The following table will show the entries at the show for the past four years:—

	1877.	1876.	1875.	1874.	1873.
Cattle...	54	66	55	50	55
Horses...	142	170	143	181	165
Sheep...	30	49	45	53	34
Pigs...	22	27	23	19	16
Poultry...	201	172	180	197	146
Pigeons...	381	379	343	247	219
Dogs...	216	261	209	200	143
Stands...	3	...	...	...	...
	1,049	1,124	1,003	946	783

The amount offered by the Society in prizes was £450, in addition to which several silver cups were competed for. The show of cattle was decidedly superior in quality to that of any previous year, and contained animals which

have carried off prizes at almost the whole of the principal exhibitions in England. Amongst the Shorthorn bulls, which were a grand class throughout, the almost invisible Sir Arthur Ingram, a roan five years and seven months old, the property of Mr. Wm. Linton, Sheriff Hutton, York, came off with first honours. This animal took the first prize in the aged-bull class at the recent Royal Show at Liverpool. It also carried off the £250 cup as the best bull in the yard. At the Norfolk County Show it obtained the premier award, along with the Prince of Wales' plate as a special prize. It was afterwards victorious at the Essex County Show at Chelmsford, and received the 100 guineas cup as the best animal in the yard. At the Yorkshire County Show at York, the Durham County Show, and at Newcastle it was equally successful. The winner of the second prize was The Beau, twenty-one months old, the property of Lady Pigot. The Beau recently took the premier award at the Bath and West of England Show, and the third prize at the Norfolk County Show. Nobilis, a roan, 10 months and 28 days old, also the property of Lady Pigot, carried off the first prize amongst the bull calves under twelve months old, this being the second time it has been exhibited. There were nine entries in the class for Shorthorn cows or heifers over two years old, the whole of the animals exhibited having previously gained distinction at local shows. The winner was Mr. T. H. Hutchinson's Lady Alicia, an animal which has obtained the following prizes during the present season:—Second at the Royal Show, at Liverpool; first at the Yorkshire Show, at York; first at the Newcastle Show; first at the Durham County Show, at Hartlepool; and first at the Bedou Show, on Friday last. The second prize was awarded to Lady Pigot's Imperious Queen—a roan cow, which has previously carried off no less than 35 prizes, 33 firsts, and 2 seconds. During the present year it has taken cups at Northumberland, Bedford, and Northampton, and also the 100 guineas cup at Ulverston. Amongst the sheep there was little competition, though the stock exhibited were of good quality. Amongst pigs the small and middle breeds were capital classes. The cup was secured by Mr. Hannan, Leeds, with an animal deserving of the prize. Pigeons were a good all-round show, the cup bird in the carrier class, shown by Mr. Ackroyd, being a very superior one. The judging of horses, which was watched throughout the day by an immense crowd, was a work of considerable time. The entries in almost all departments were up to the mark, including, as they did, some of the finest animals in Yorkshire. Amongst the roadster stallions were some well-known animals, Prime Minister, the property of Mr. Treffit, Wold Farm, Huggate, Pocklington, this time beating his old antagonist Charley Merrylegs, owned by Mr. Collins, Houghton, York. Hunters were also a capital, though not a numerous, show. The premier award was a silver cup, of £20, which was won by Mr. P. Newton's bay, Sir George. The second prize, £10, was awarded to Mr. A. J. Brown, Pontefract; and the third to Mr. T. H. Hutchinson, with Glangyle. The leaping contest over hurdles and stone walls excited a great amount of interest. For the best leaper over hurdles a silver cup, of the value of £10, was offered. After an exciting competition, the prize was carried off by Mr. P. Jowitt, Hipperholme, whilst a similar prize, for the best leaper over a stone wall, was taken by Mr. J. Walburn, Scarborough.

The following is a list of the awards:—

HORSES.

Roadster, colt, gelding, or filly, one year old.—First prize, S. Mitchell, Bailey; second, M. Spencer, Sutton, near Crosshills.

Roadster, gelding, or filly, two years old.—First prize, J. Midgley, Rookes-lane, Padsey; second, R. Farahill, Bailey.

Rooster, gelding or filly, three years old.—First prize, R. Parhill; second, H. Cantley, Prospect Hill, Bramley.

Rooster, mare and foal.—First prize, J. F. Crowther, Mirfield; second, J. Smith, North Villas, Keighley.

Draught or agricultural mare or foal.—First prize, J. Clarkson, Silsden; second, T. Salt, Bingley.

Draught mare or gelding.—First prize, J. F. Crowther; second, Emulators of J. M. Kirk, Halifax.

Mare or gelding for agricultural or general purposes.—First prize, Emulators of J. M. Kirk; second, J. Green and Son, Ryshworth Bridge, Bingley; third, J. Clarkson.

Mare or gelding for agricultural or general purposes, open to the parish of Bingley, and no winner of first prize in this class, in any previous year be allowed to compete.—First prize, J. Green and Son; second, T. Salt; third, Therp and Statham, Dewley Gap, Bingley.

Pony in saddle, not exceeding 14 hands high.—First prize, J. Stephenson, Leeds; second, F. Tankard, Bowling Hall, Bradford.

Pony in saddle, under 12½ hands high.—First prize, T. Paps, Leeds; second, T. Butler, Busby, Leeds.

Draught stallion.—First prize, J. F. Crowther, Knowl Grove, Mirfield; second, B. Gledhill, Little Lepton, near Huddersfield.

Rooster stallion.—First prize, P. Trefit, Weld Farm, Pocklington; second, J. Collins, Houghton, York; third, J. Gill, Stud Farm, Seaham, Silsden, near Leeds.

Cob, not exceeding 15 hands high.—First prize, J. Robinson, Hesle-road, Hull; second, H. Mason, Banksfield, Bingley; third, T. H. Thwaites, Horton-road, Bradford.

Nag or roadster.—First prize, J. Robinson, Hull; second, C. Rose, Norton, Malton; third, R. Y. Gledhill, Park-road, Bradford.

Pony, in single harness, not exceeding 13 hands high.—First prize, W. Beyner, Crown Hotel, Wyke, Bradford; second, C. H. Thorpe, Dudley Hill, Bradford.

Pony in single harness, not exceeding 14 hands high.—First prize, H. Lacy; second, J. Stephenson.

Horse or mare in single harness.—Prize, R. Martin, Scaresby Flinton, York.

Hunter, without condition as to weight.—First prize, F. P. Newton, Norton, Malton; second, A. J. Brown, North Elm-stall Hall; Pontefract; third, T. H. Hutchinson.

Leaper.—First prize, P. Jowett, Hipperholme; second, J. Welburn, Hackness, Scarborough; third, H. Croxley, Adwalton.

Stonewall leaper.—First prize, J. Welburn; second, W. H. Stutter, Bury; third, H. Croxley.

CATTLE.

SHORTHORNS.

Bull, over twelve months old.—First prize, W. Linton, Sheriff Hutton, York; second, Lady Pigot, West Hall, Byfleet, Surrey.

Bull calf, under twelve months old.—First prize, Lady Pigot; second, T. H. Hutchinson, Manor House, Osterick.

Cow or heifer, over two years old.—First prize, T. H. Hutchinson; second, Lady Pigot.

Heifer, over twelve months and not exceeding two years old.—First prize, Lady Pigot; second, W. Linton.

Heifer calf, under twelve months old.—First prize, Lady Pigot; second, G. Hargreaves.

Two Shorthorns, any sex or age.—First prize, W. Linton; second, Lady Pigot.

Bull, over twelve months old.—Prize, B. Fletcher.

Bull, under twelve months old.—First prize, A. King, Kighley; second, T. Dibb, Cottingley.

Cow or heifer, over two years old.—First prize, J. Robertshaw, The Grange, Allerton; second, B. Fletcher.

Heifer calf, under twelve months old.—First prize, H. O. Howhall, Brierfield Brewery, near Burnley; second, B. Fletcher.

Cow for dairy purposes.—First prize, J. Smith, Hainworth Shay, near Keighley; second, T. Dibb.

SHEEP.

LEICESTER, OR OTHER LONG-WOOLS.

Ram, one-shear or aged.—First and second prizes, J. Green and Son.

Ram lamb.—First prize, J. Green and Son; second, W. M. Spence, Weston, Otley.

Three ewes, one-shear or aged.—First and second prizes, J. Green and Son.

Three ewe lambs.—First prize, J. Dales, Kearley, Wetherby; second, J. Green and Son.

LONKS.

Ram, one-shear or aged.—First prize, F. Harrison, Long Lee, Keighley; second, J. Green and Son.

Ram lamb.—First and second prizes, J. Green and Son.

Three ewes, one-shear or aged.—First and second prizes, J. Green and Son.

Three ewe lambs.—First and second prizes, J. Green and Son.

CROSS-BREED.

(Confined to the parish of Bingley.)

Three half-bred ewes, one-shear or aged.—First prize, W. Barron, Micklethwaite; second, W. Walsh, Gilstead.

Three half-bred ewe lambs.—First prize, W. Barron; second, W. H. Jackson.

PIGS.

Bear, middle breed.—First prize, W. Parker, Golden Lion, Bradford; second, J. Graham, York-road, Leeds.

Boars, small breed.—Prize, W. Parker.

Sow, middle breed.—First prize, J. Bennett, High-street, Great Horton; second, W. H. Clay, Shay Bottom, Denholme.

Sow, small breed.—First prize, ewe, T. Hannas, Beckett-street, Leeds; second, W. Parker, Bradford.

Fat or store.—First and second prizes, W. Williamson, York-road, Leeds.

Sow and litter of pigs, confined to the parish of Bingley.—First prize, W. Walsh; second, Holmes Brothers, Dubb, Bingley.—*The Leeds Mercury.*

HALIFAX AND CALDER VALE.

On August 25 the Halifax and Calder Vale Agricultural Society held its thirty-ninth annual exhibition of cattle, horses, pigs, harriers, wool, &c., in the Craven Lodge Grounds, Halifax. The exhibition, compared with those of former years, was about the best the Society has ever had. Though in the two principal departments—horses and cattle—there was a slight falling off in point of numbers, the entries, in the aggregate, exceeded those of any previous year. Last year the entries numbered 990, while this year they were 1,024. Their classification was as follows:—1876—Cattle 86, horses 251, pigs 71, harriers 18, wool 78, pens of poultry 165, pens of pigeons 184, eggs 7, roots 28, butter 6, implements 151. 1877—Cattle 81, horses 238, pigs 83, harriers 18, wool 80, pens of poultry 180, pens of pigeons 82, eggs 11, roots 34, butter 3, implements 214. The amount offered by the Society in prizes was upwards of £600. In addition, 47 silver cups were completed for, along with the following special prizes:—£10 for the best thoroughbred stallion, £20 for the best draught stallion, and £15 for the best hunter. Increased prizes were also offered for the best leapers and harness horses. In the quality of the exhibits in the cattle department there was a marked improvement. Shorthorn bulls especially possessing merit. For the silver cup of the value of £5 5s., offered by Mr. E. Akroyd, J.P., Bankfield, for the best two-year-old and aged Shorthorned bull, there were four competitors. The winner was "Sergeant Irwin," the property of Mr. T. Atkinson, Higher House, Unsworth, Whitefield. Mr. Atkinson also carried off the silver cup offered by the Mayor of Halifax for the best three-year-old and aged Shorthorned cow. In the dairy cow classes the entries were not large, though some very promising animals were exhibited. The silver cup for the best dairy cow above three years old, offered by Mr. S. T. Bigge, Halifax, was awarded to Mr. J. Stansfield, Oldham; whilst a similar prize, offered by Mr. A. Stansfield, Rodwell Head, Todmorden. Several other cups, the winners of which will be found in the appended

Rat of prize-takers, were offered for competition. The horses were a capital show, especially in the hunters, roadsters, and stallion departments. A silver cup of the value of £10 10s., offered by Messrs. G. and J. Scarborough, was carried from four other competitors by "Grand Master," owned by Messrs. J. and W. Cockbott, Cringle, near Leeds. A prize of a like value, offered by Messrs. C. Fuller, Savile Lodge, and W. Ambler, Kirby Lea, for the best hunter of any age, to carry 15 stones with hounds, was taken by "Colonel," a five-year-old belonging to Mr. J. Shepherd, Beverley. Some capital animals were exhibited amongst the leapers, and after a prolonged competition the principal prizes were awarded:—The Licensed Victuallers' Silver Cup, value £10 10s., to Mr. H. Cousins, Northwich, Cheshire; and Mr. W. H. Rawson, J.P.'s, silver cup, value £5 5s., to Mr. W. Wright, Halifax. The event which appeared to excite the greatest interest during the day was the competition amongst stallions of any age for the £20 silver cup offered by the Society and Mr. G. Sunderland, Salter-lee. There were six entries, the successful competitor being Mr. J. F. Crowther, Knowl Grove, Mirfield. The show of wool was a good one, especially in the Lincoln wether department. Pigs, poultry, pigeons, and implements formed attractive additions to the exhibition. The weather during the day was cold and dull, and towards evening several showers of rain fell. Though not quite equal to that of last year, the attendance of spectators was very large. The Show-ground consequently was crowded, and hence the inconvenience experienced last year in passing through the narrow opening from one field to another was repeated. During the afternoon a luncheon was provided on the ground, when Sir Henry Edwards, Bart., presided.

The following is the award of prizes:—

CATTLE.

BULLS.

(Open to the United Kingdom.)

Two-year-old and aged Shorthorned bull.—First prize, T. Atkinson, Whitefield; second, J. Rowley, Pontefract.

One-year-old Shorthorned bull.—First prize, W. Tennant Selby; second, H. Fawcett, Otley.

Shorthorned bull calf, under twelve months old.—First prize, J. Brown, Warley.

Alderney or Guernsey bull, any age.—First prize, T. Riley, Mytholmroyd.

Shorthorned bull, any age.—First prize, S. Turner, Northowram; second, R. Greenwood, Mytholmroyd.

COWS.

Three-year-old and aged Shorthorned cow.—First prize, T. Atkinson, Whitefield; second, Stand Stud Company, Manchester.

Two-year-old Shorthorned cow.—First prize, Stand Stud Company, Manchester; second, H. Fawcett, Otley.

One-year-old Shorthorned cow.—First prize, Stand Stud Company, Manchester; second, T. Atkinson, Whitefield.

Shorthorned Wye calf, under twelve months old.—First prize, H. Fawcett, Old Bramhope; second, T. Atkinson, Whitefield.

Alderney or Jersey cow, any age.—First prize, S. Waterhouse, M.P., Elland.

Ayrshire cows, any age.—First prize, Stand Stud Company, Whitefield; second, T. Riley, Mytholmroyd.

Dairy cow, above three years old (except pure-bred Shorthorned).—First prize, J. Stansfield, Oldham; second, J. Scott, Womersley, near Pontefract.

Dairy cow, under three years old (except pure-bred Shorthorned).—First prize, J. Stansfield, Oldham.

Best of any of the following breeds or fanciful cross breeds of cattle, viz., Welsh, Irish, Scotch, Devon, Kerry, Brittany, or any other breeds or cross-breeds not already named, most useful for milking purposes.—First prize, R. Barker, Todmorden; A. Stansfield, Todmorden.

Two dairy cows, any age, the property of a cattle dealer only.—First and second prizes, A. Stansfield, Todmorden.

Two cows, under three years old, the property of a cattle dealer only.—First prize, J. Wright, Luddenden Foot; second, A. Stansfield, Todmorden.

Three-year-old and aged Shorthorn cow.—First prize, S. Turner; second, R. Barker, Todmorden.

Two-year-old Shorthorned cow.—First prize, S. Lord, Todmorden.

One-year-old Shorthorned cow.—First prize, R. Barker; second, J. B. Baneroff, Ovenden Wood.

Shorthorned Wye calf, under twelve months old.—First prize, R. Barker; second, W. Briggs, Clayton.

Dairy cow, any age or breed, or cross breed (except pure-bred Shorthorned) most likely for milking or dairy purposes.—First prize, S. Lord; second, S. Turner.

Dairy cow, any age or breed, the property of a farmer under Major Stocks, of Shibden Hall.—First prize, W. Gill, Shibden.

Dairy cow, of any age or breed, the property of a farmer resident in the township of Ovenden.—First prize, J. B. Baneroff.

Dairy cow, of any age or breed, the property of a farmer resident in the township of Ovenden.—First prize, J. and S. Greenwood, Wacky.

HOSSES.

(Open to the United Kingdom.)

Thoroughbred stallion, any age, which must travel in the parish of Halifax during the season 1876, and be expressly subject to the provisions of General Rule II.—First prize, J. and H. Cockbott, Cringle, near Leeds; second, T. Riley, Mytholmroyd.

Foal of 1877, got by "Lord Frederick".—First prize, Madal, R. J. Midgley, Springfield, Shibden; second, W. Worwick, Mytholmroyd.

Hunter, any age, to carry 15 stones and upwards, with hounds.—First prize, J. Shepherd, Beverley; second, G. F. Statter, Whitefield.

Hunter, any age, to carry 15 stones and upwards.—First prize, cap, A. J. Brown, Pontefract; second, R. Ealey, Horsforth, Leeds.

Mare or gelding for hunting purposes, not exceeding four years old.—First prize, A. J. Brown, Pontefract; second, J. Holdsworth, Halifax.

Leaper, mounted, any age or height.—First prize, Cap. J. Cousins, Northwich; second, C. Sanderson, Pontefract; third, H. Taylor, Askham, York.

Leaper (mounted), 15 hands and under, any age.—First prize, W. Wright, Halifax; second, Isaac Hall, Over Darwen; third, Mr. Boney, Chester-court, Selby.

ROADSTERS.

Stallion, any age.—First prize, Stand Stud Company, Whitefield, Manchester; second, R. Trefitt, Haggate Wold Farm, near Pocklington.

Yearling colt or filly.—First prize, S. Michael, Batley; second, James F. Crowther, Knowl-grove, Mirfield.

Two-year-old gelding or filly.—First prize, W. Rickell, Warter, near Pocklington; second, Robert Farrahill, Batley.

Three-year-old gelding or filly.—First prize, William Rickell, Warter, near Pocklington; second, T. Beerman, Croome House, Sledmere, York.

Mare or gelding, 4 years old and upwards, to be furnished with saddle and bridle.—First prize, J. Robinson, 2, Clyde-road, Hasle-road, Hall; second, J. Cousins, Northwich, Cheshire; third, J. G. Sykes, 78, Rodney, Liverpool.

Mare or gelding for saddle or harness, of any age or height, the property of a member of the Association.—First prize, P. Speck, jun., Quasenherry.

Roadster mare and foal.—First prize, J. Kirby, Stamford Bridge; second, Stand Stud Company, Manchester.

Stallion of any age, for draught or agricultural purposes.—First and second prizes, J. F. Crowther, Mirfield.

Yearling colt or filly, for draught or agricultural purposes.—First prize, Stand Stud Company; second, W. Tennant, Selby.

Two-year-old gelding or filly, for draught or agricultural purposes.—First prize, Stand Stud Company.

Three-year-old gelding or filly, for draught or agricultural purposes.—First prize, J. Jennings and Son, Halifax; second, W. Ingham and Sons, Leeds.

Draught mare or gelding, any height, four years old and upwards.—First prize, J. F. Crowther, Mirfield.

Draught mare or gelding, any height, four years old and up-

wards, the property of a tradesman or farmer resident within the parish of Halifax.—First prize, A. Palman and Sons, Halifax; second, J. M. Kirk's Executors, Halifax.

Mare or gelding, for van purposes, not exceeding 16½ hands, any age, the property of a tradesman or farmer resident within the parish of Halifax.—First prize, J. Croxley and Sons, Halifax; second, Sowerby Bridge Flour Society.

Mare or gelding, for agricultural purposes, not exceeding 16½ hands, any age, the property of a tradesman or farmer resident within the parish of Halifax.—First prize, J. M. Kirk's Executors, Halifax; second, J. Ackroyd and Son, Limited, Halifax.

Mare or gelding, for draught or agricultural purposes not exceeding 16 hands, any age, the property of a tradesman or farmer resident within the parish of Halifax.—First prize, A. Palman and Sons, Halifax; second, J. Ackroyd and Son, Limited, Halifax.

Pair of draught horses, any age or height, the property of a tradesman or farmer resident within the parish of Halifax.—First prize, A. Palman and Sons, Halifax; second, J. M. Kirk's Executors, Halifax.

Mare and foal, for draught and agricultural purposes.—First prize, Savile Mills Company, Dewsbury; second, W. Tennant, Selby.

Hans, most suitable for young cavalry purposes, any age.—First prize, John Mande, Leeds; second, Joseph Barnard, Leeds.

Stallion of any age, for coaching purposes, whose owner must give an undertaking if he gets the prize that the horse will travel in the parish of Halifax during the season 1878, and be expressly subject to the provisions of General Rule No. 11.—First prize, Edmund Fort, Silsden, Leeds; second, H. P. Rhodes, Dingley.

Carriage horse, any age.—First prize, Sir H. Edwards, Bart., Halifax; second, J. Kirby, Stamford Bridge, near York.

Lady's pad.—First prize, T. Bowman, Sledmere, York; second, M. Myer, Bradford.

Cob (mounted) not exceeding 14½ hands, any age.—First prize, J. Nelson, Wilmot; second, J. C. Rogers, Manchester.

Cob, not exceeding 14½ hands, any age, for harness purposes, to be shown in harness and trap.—First prize, James Stevenson, Leeds; second, Edward Sted, Hobden Bridge.

Mare or gelding, any age, to be shown in harness and single harness, the property of a member of the Association.—First prize, S. G. Webster, Ovenden; second, Paul Spink, jun., Queensbury.

Mare or gelding for harness purposes, any age or height, to be shown in harness and trap.—First prize, Stand Steel Company, Manchester; second, Mrs. J. Croxley, Halifax.

Appointed tandem of horses over 15½ hands, any age.—First prize, Mrs. J. Croxley, Halifax; second, W. H. Smith, Undercliffe.

Pony, not exceeding 13½ hands, any age, to be shown in harness and trap.—First prize, H. Lacy, Hobden Bridge; second, H. Thorp, Bradford.

Pony (mounted), not exceeding 13½ hands, any age.—First prize, and bridle, H. Lacy; second, J. Holdsworth, Halifax.

Pony (mounted), not exceeding 13½ hands, any age.—First prize, T. Page, Leeds; second, A. Ashton, Middleton, Lancashire.

Cob horse, any age or height.—First prize, J. Tiffany, Halifax; second, T. G. Howell, Halifax.

Two-year-old gelding or filly, for draught or agricultural purposes, bred by exhibitor, the property of a farmer resident within the parish of Halifax.—First prize, W. Driver, Southowram.

Groomed draught horse, and gear kept in best condition.—First prize, Balmer and Fritchard, Halifax; second, A. Nicklethwaite, Longwood.

Donkey or male and cart, male or female, any age.—First prize, R. Simpson, Selby; second, J. Ackroyd, Thornton; third, B. Lockwood, Holmfirth.

FIGS.

Boar, large breed, any age.—First prize, Earl of Ellesmere, Worsley Hall, Manchester; second, R. E. Duckering, Northorpe, Kirton Lindsey.

Boar, middle breed, any age.—First prize, Richard Speight, 3, Grant-street, off Leeds-road, Bradford; second, John and Joseph Nattall, 13, Longfield, Heywood.

Boar, small breed, any age.—First prize, Earl of Ellesmere, Worsley Hall, Manchester; second, R. E. Duckering, Northorpe, Kirton Lindsey.

Black boar, any age or breed.—First prize, Charles Bramall, Westmoreland-street, Wakefield; second, Mitchell Walton, Foundry-street, Halifax.

Boar, under six months old, any breed.—First prize, Charles Haley, 12, Cross-lane, Great Horton, Bradford; second, Alfred Crowther, Star Inn, Bridge-street, Bury.

Sow, any age or breed, and litter of pigs.—First prize, Alfred Jackson, Spring Wood-street, South-street, Huddersfield; second, Charles F. Hallas, 47, Manchester-road, Huddersfield.

Sow, large breed, aged.—First and second prizes, Earl of Ellesmere, Worsley Hall, Manchester.

Sow, middle breed, any age.—First prize, Earl of Ellesmere, Worsley Hall, Manchester; second, Charles F. Hallas, 47, Manchester-road, Huddersfield.

Sow, small breed, any age.—First prize, Earl of Ellesmere, Worsley Hall, Manchester; second, R. E. Duckering, Northorpe, Kirton Lindsey.

Black sow, any age or breed.—First prize, Earl of Ellesmere, Worsley Hall, Manchester; second, C. E. Duckering, Whitchoe, Kirton Lindsey.

Gilt, under six months old, any breed.—First prize, Charles Haley, Cross-lane, Great Horton, Bradford; second, Allen Coates, Lower Wharf, near Halifax.

Store pig, large or middle breed, any age.—First prize, Alfred Crowther, Bridge-street, Bury; second, John and Joseph Nattall, Longfield, Heywood.

Store pig, small breed, any age.—First prize, Alfred Crowther, Bury; second, Abm. Barratt, Sunny-side, Ranges-lane, Haley Hill.

Black store pig, any age or breed.—First prize, Mitchell Walton, Foundry-street, Halifax; second, Charles F. Hallas, 47, Manchester-road, Huddersfield.

PREMIUMS.

(Open to working men resident within the parish of Halifax). Pig, any sex or breed, any age above six months old, the Society's silver cup.—First prize, Jeremiah Rushton, (cup), Southowram; second, W. D. Dewhurst, Sowerd House, Hipperholme.

Gilt, any breed, under six months old, Vice-President's silver cup, Reuben Squire (cup), Hase-street, Halifax; second, J. Rushton.

The Borough Member's silver cup (Right Hon. J. Stanfield's), boar, of any age, colour, or breed (except black).—First prize, Earl of Ellesmere.

The Society's silver cup, to sow of any age, colour, or breed (except black).—First prize, Earl of Ellesmere.

The Vice-President's (Mr. W. Foster, J.P.) silver cup, black pig, any age, sex, or breed.—First prize, Charles Bramall.

WOOL.

Three flocks Northumberland picked hog wool.—First prize, J. A. Holmes, Bradford; second, W. W. Sykes, Bradford.

Three flocks Northumberland super hog wool.—First and second prizes, J. A. Holmes.

Three flocks Northumberland wether wool.—First prize, J. A. Holmes; second, W. W. Sykes.

Three flocks Irish hog wool.—First and second prizes, S. M. Cockin, Halifax.

Three flocks Irish wether wool.—First and second prizes, J. A. Holmes.

Three flocks Midland or South Counties hog wool.—First prize, E. Webb and Sons, Bradford; second, W. Gunk-roper, Halifax.

Three flocks Midland or South Counties wether wool.—First prize, E. Webb and Sons, Bradford; second, J. A. Holmes, Bradford.

Three flocks Lincoln hog wool.—First prize, Stanfield and Co., Halifax; second, B. B. Holdsworth, Halifax.

Three flocks Lincoln wether wool.—First and second prizes, B. B. Holdsworth.

Three flocks Norfolk or Shropshire hog wool.—First prize, J. Woodhead, Wilmsley; second, S. Erier and Co., Halifax.

Three fleeces, Norfolk or Shropshire wether wool.—First prize, S. Brier and Co., Halifax; second, J. A. Holmes, Bradford.

Three fleeces Yorkshire hogg wool.—First prize, R. B. Holdsworth, Halifax; second, Stansfield and Co., Halifax.

Three fleeces Yorkshire wether wool.—First prize, R. B. Holdsworth, Halifax; second, Stansfield and Co., Halifax.

Three fleeces any other sort, English and foreign, hogg wool.—First prize, Thomas Taylor and Son, woolstaplers, Halifax; second, J. A. Holmes, Piccadilly, Bradford.

Three fleeces any other sort, English and foreign, wether wool.—First prize, Thomas Taylor and Son, woolstaplers, Halifax; second, J. A. Holmes, Piccadilly, Bradford.

—*Leeds Mercury.*

LANCASTER.

The seventeenth annual exhibition was held at Lancaster on August 29. The total number of entries was 897, against 1,017 last year, apportioned as follows: Cattle, 120 entries, sheep 144, horses 207, pigs 16, dogs 54, poultry 68, butter, roots, &c., 81, implements 207. The show of horses was a remarkably good one, and the competition was keen in several departments. The cattle generally, especially bulls and Shorthorn cows, were a creditable class. Sheep were not so numerous as on former occasions, and there was a falling off in dogs. The display of implements was about the same as usual. The prizes offered for competition represented a value of £230. The weather was fine, and the attendance of visitors highly satisfactory. Subjoined is a list of winners of first prizes in the principal classes:

CATTLE.—Shorthorned bull, two years old or upwards, Messrs. Gaiskell, Hall, Sinton; yearling bull, W. Handley, Greenhead; bull calf, Messrs. Gaiskell; cow in calf or milk not fed for the butcher, Messrs. Gaiskell; heifer ditto, W. Handley; yearling ditto, W. Handley; three dairy cows, W. Handley; fat cattle, J. Jackson, Garstang. Special prizes for tenant-farmers within ten miles of Lancaster: Bull, two years old or upwards, J. Leese, Melling; yearling bull, J. Bromby, Fenton; bull calf, A. Cottam, Excliffe Hall; cow, W. Boskell, Halton; two-year-old heifer, J. Cottam, Scotforth; yearling ditto, R. Sandham, Lancaster; heifer calf, J. Cottam; three cows, R. Sandham.

SHEEP.—Leicester: Shewling ram, J. Cook, Coat Green, Barton; ram of any age, J. Cook; three one-shear gimmers, J. Cook; pen of ewes, J. Smith, Lancaster; gimmer lambs, J. Cook; tup lamb, J. Cook. Challenge Cup for collection of Leicester sheep, J. Cook. Down or shortwooled: Shearling ram, W. Garnett, Quarrenden Park; ram of any age, R. Bowling, Scotforth; three one-shear gimmers, W. Garnett; three ewes, W. Handley, Greenhead; tup lamb, W. Handley; gimmer lambs, R. Bowling; challenge cup, for best collection, W. Garnett. Longwooled sheep: Shearling ram, J. Sedgwick, Kendal; three one-shear gimmers, J. Sedgwick; ram of any age, J. Sedgwick; three ewes, J. Sedgwick; gimmer lambs, J. Sedgwick; tup lamb, W. W. Rutledge, Kendal; collection of longwooled, not being Leicester, J. Sedgwick.

HORSES.—Road or field brood mare, B. Bee, Goosnargh; three-year-old gelding, W. Mason, Ousterthwaite; ditto filly, J. Logan, Low Wood; two-year-old gelding, W. Mason; ditto filly, W. Richardson, Buntow; yearling gelding, J. Dixon, Dalton; yearling filly, W. Mason; colt foal, J. Albright, Carnworth Hall; filly foal, J. Jackson, Yealand. Challenge cup for three-year-old gelding, W. Mason. Agricultural horses: Brood mare, C. W. Wilson, Kendal; three-year-old gelding or filly, W. Cape, Grange.

PIGS.—Boar, large breed, W. Lamb, Skerton; breeding sow, J. Thompson, Scotforth; ditto small breed, R. Burrow, Wrayton Hall; store pig, E. Atkinson, Skerton; Berkshire boar, R. Bowling, Scotforth; ditto sow, R. Bowling.

A luncheon was held on the ground, under the presidency of the Right Hon. Lord Wimborne. —*Manchester Examiner.*

RICHMOND SHIRE.

A special meeting of the members of the Richmondshire Agricultural Association, convened by circular, was held on

August 25, in Richmond Town Hall, under the presidency of Mr. W. H. Wilson-Todd. The circular stated: "The Council have decided to postpone their Show intended to be held on the 30th of August, in consequence of a fever of a serious nature being very prevalent at Bedale. And the meeting was called 'to arrange as to what steps should be taken.'"

Mr. A. YOUNG proposed that the Show be abandoned for the present year, as it seemed to be the general opinion of the Council that it should be so.

Mr. J. O. TROTTER seconded the motion.

Mr. R. CHAPMAN spoke of the Yorkshire Show being held at Northallerton next year, and considered it would greatly interfere with the Richmondshire Show being held at Bedale.

THE MAYOR OF RICHMOND thought the Show might be held at Richmond this year, the question being whether there was time before the autumn was too far advanced.

Mr. R. SIMPSON would have been glad to support his Worship, but he was afraid there was not sufficient time left for the holding of the Show at Richmond this year; neither did he think the people of Richmond would be prepared to substitute the special prizes which had been offered. He therefore supported Mr. Young's motion.

Mr. W. P. HOBBS shared this opinion and considered, under the existing circumstances, it would be as well to abandon the Show until next year, whether it was held at Richmond or Bedale. The motion was then put to the meeting and carried.

The CHAIRMAN said it was most unfortunate that the Show had to be abandoned, because the entries showed a considerable increase on the previous year, and he thought it would be interesting to read a list of entries for the two years. They were as follows:—

	Leayburn. 1876.	Bedale. 1877.
Cattle.....	65	70
Sheep.....	90	97
Pigs.....	9	19
Horses.....	159	201
Roots.....	41	54
Cheese and Butter.....	19	13
Poultry.....	63	63
Stands of Implements.....	11	16
	449	530

The Mayor of RICHMOND recommended that there should be an expression from the Council suggesting that the Show should be held at Bedale next year, and at Richmond in the following year.

Mr. YOUNG said he did not see they could possibly make any expression; it was for the future meeting of the Council to decide.

TARPORLEY.

The annual show of the Tarporley Agricultural Society was held on August 29, at Salterwell, and, different to most of the similar events that have come off lately, was favoured with fine weather. In one sense, of course, fine weather was desirable for the gathering, but it told against the coffers of the Society. The farmers have so long been prevented by the constant rain from getting at their crops that the first glimpse of sunshine sent them all out in their fields, and they, wisely no doubt, considered that their presence would be better disposed at home than at Tarporley Show. The attendance was by no means small, notwithstanding; but, as we say, the fine weather had undoubtedly an injurious effect on it. Last year, when the show was held at Nantwich, and when the rain came down steadily the whole of the day, there was an attendance quite as large, if not larger, than Wednesday's. Taking the various departments in the order in which they were arranged, we came first on the horses, of which, for a local show, there was a capital display. There were several very good entire horses for agricultural purposes, and also a entire horses for hunters, in which second class Mr. Poinson, with his well-known "Happy Land," once more took first honours. In the class for pairs of horses for agricultural purposes three good pairs were shown, and the award of the judges was generally considered satisfactory. In the class for brood mares

for agricultural purposes, in which Mr. Wade, of Utkinton, took the first prize, there was a large number of animals shown, but the quality of nearly all was very indifferent. The first prize horse was a very good specimen, and contrasted very favourably some of his whilom neighbours. The show of mares or geldings for agricultural purposes was of capital quality, and the entries were large, allowing for the fact that the show is only a local one. The entries were also large in the class for colts for agricultural purposes, and included some very promising animals; but in the classes for colts the show was indifferent. Those belonging to Mr. Wm. Vernon, of Four Lane Ends, were undoubtedly the two best of the lot. The show of cattle was not a large one, but the quality was on the whole very good. The first class, for bulls above two years old, did not obtain many entries, but what were shown were excellent beasts. The one with which Mr. Beecroft, of Upton, took the first prize, was a grand animal. In the class for younger bulls there was nothing shown worthy of a special notice, and the same may be said of the show of bull calves. The dairy cows were exceedingly good, and included three pairs of really fine milkers. "Young Oudine," shown by Mr. Chesters, of Nantwich, and which won for him a first prize, was as fine a cow of the kind as we have seen for a long time. The show of Channel Island cows was a very small one, but the quality of those which were shown was very good. Mr. Chesters, of Nantwich, was again successful in the class for pairs of two-year-old heifers, with a really splendid pair of beasts. In the class for younger heifers only three pairs were shown, and there was nothing very particular about any of them. The cottagers of the neighbourhood only sent two cows to compete in the class for cottager's cows, but the first prize beast, though a little out of condition, was a very nice useful beast. The heifer calves were large in number, and also excellent in quality. The show of sheep was comparatively small, but in point of quality was—at least the majority of the visitors said so—very good indeed. Sir Philip Egerton, Mr. Parker, of Stanney, and Mr. Cheam, of Barrow, were the largest exhibitors and prize takers. Pigs were, so competent judges said, as a whole, a very poor show. In the class for old boars only two were shown. The first was a very fair pig, and so was the first in the next class, for young boars, which belongs to Mr. A. C. Lookwood. The remainder do not deserve any special notice. The best thing in the show was the really grand display of butter and cheese. Of the first every one spoke in terms of high commendation. The prizes went mostly to others than farmers, who entered in very small numbers. In the only class for butter there were sixteen entries, and nearly all the prizes were awarded to cream butter. The three first prizes went respectively to Mr. Dawson, of Stapleford, Dr. Sellar, of Tarporley, and the Earl of Haddington—a miller, a doctor, and a lord. The fourth prize went to S. Blais, Tarporley; and Mr. Vernon, of Gosland Green, obtained a high commendation.—*Chester Chronicle*.

CHESHIRE, SHROPSHIRE, AND NORTH WALES FARMERS' SUPPLY ASSOCIATION.

A general meeting of the shareholders of the above Society was held at the Royal Hotel, Crewe, on August 21, Mr. G. W. Latham (Chairman of Directors) presiding.

The SECRETARY read the notice convening the meeting; after which the minutes of the previous meeting were read and confirmed.

The SECRETARY read the auditor's report as follows:—"My Lords and Gentlemen,—I beg leave to report that I have audited the accounts of the Cheshire, Shropshire, and North Wales Farmers' Supply Association, Limited, for the year ending 30th June, 1877, and that the subjoined balance-sheet contains the particulars as required by the regulations of the Association, and is properly drawn up so as to exhibit a true and correct view of the state of the Society's affairs. It will be noticed that, notwithstanding the amount for goods sold exceeds by close on £4,000 that of the preceding year, the profits are less by £300—caused, in a great measure, by the reduced charge for 'two ton lots of cake, or twenty sacks of corn or meal,' authorised by the Directors, in May, 1876, to the advantage of the large at the expense of the small purchaser, which will, I respectfully submit, tend to cause a feeling

of dissatisfaction, and is inimical to the best interests of the Association. I feel that I should hardly be doing justice to the Secretary were I to allow the report of this, my sixth annual audit, to pass without especially testifying to the very accurate and satisfactory state in which I have invariably found the books and accounts.

"I have the honour to remain, my lords and gentlemen,

Your obedient servant,

"J. TOMLINSON, Auditor."

The report of the Directors was next read and adopted.

On the motion of the CHAIRMAN, seconded by Mr. BYRN, a dividend of £1 6s. 1d. was declared, and the sum of £45 carried to the reserve fund.

THE EAST OF ENGLAND HORSE SHOW.

This exhibition, which we believe is the third edition for this year, was held at Colchester, on September 6 and 7. As a show of horses there is not very much to be said in favour of this meeting. The entries were not numerous, there being only 130, including ponies, and these were not all present on the first day. The last number in the catalogue was 200, and the natural conclusion of anyone looking carefully at the numbers would be that there were 200 entries; but between the several classes there were numbers not represented, a peculiarity which requires explanation. The East of England Show, however, is popular in its district, not as a horse show merely, but chiefly for the jumping and riding sports of various kinds which take place. Besides the racing, jumping, and trotting races, a Polo match, a pony race, taking the apple, cutting the lemon, sword exercise, post practice, picking up baskets with swords, and tilting the ring attracted the attention of a fairly numerous body of spectators. The Polo match was between the officers of the 6th Dragoon Guards and the Essex Polo Club, and the former were victorious. This sport is no doubt very exciting both to players and lookers-on; but it is terribly cruel, and ought to be prohibited by law. The unfortunate ponies get serious blows, besides being galloped, beaten, and spurred unmercifully, or pulled up sharply, as the exigencies of the game require. We are informed that the unfortunate animals dread the game so much that, after being used to it a little time, it is difficult to drive them into the ground where they know the sport is to take place. Some of the other horse exercises and feats of skill were graceful and unobjectionable. These acts of horsemanship were chiefly performed by troopers and their officers from the Colchester Camp. In the hunters' Cal. Barlow's King Charming took the first prize, Mr. Benton's bay being second. The jumping over hurdles was not brilliant, most of the horses knocking down two or three hurdles out of the six at each round.

BURGESS AND KEYS' IMPROVED REGULATING REAPER.

—This improved reaper, of which we spoke favourably in reporting on the Bath Show, was tried recently on Bowman's Green Farm, near St. Albans. The crop, we are informed, was heavy in parts and a good deal laid; but the reaper cut it in all directions closely and well, leaving the corn in square sheaves well laid for binding, so that but little was left for the horse rake to clear up. The machine has since continued cutting on the same farm, and the proprietor now writes:—"I am using the reaper on barley with great satisfaction; it makes excellent work. The more I see of the reaper the better I like it." Turning to our report of the Bath Show we find this reaper thus noticed:—"A new regulating reaper, which attracted attention, was that of Messrs. Burgess and Key, of London. The regulating arrangement is effected by means of a swinging cam, and by an ingenious system of gearing the driver is able, by simply moving a lever, to vary the rate of sheaf-delivery as he moves along, as well as to carry the outer corn round the corners of the standing crop. The gearing of the rakes is outside and the knife gearing inside the main wheel, and the weight of the gearing as well as that of the driver is kept off the small wheel—a great desideratum."

THE SHORTHORN SALES IN THE NORTH OF ENGLAND.

MR. COCHRANE'S SALE.

On Tuesday, Sept. 4th, Mr. Thornton held the first of his three days' sales in the Lake district, at Millbeckstock, Bowness, Westmorland. The Crown Hotel, Bowness, has long been noted as the resort of American visitors to our Lakes, and to Mr. Cloudsdale were the stock of the Hon. M. H. Cochrane, of Hillhurst, Compton, Canada, with a few from Mr. Beattie, of Annap, Scotland, consigned. They arrived all well, a fortnight before the sale, and they were certainly in the height of condition. They embraced selections of both Bates and Booth cattle. Luncheon was served by Mr. Cloudsdale to between 400 and 500 guests on the sale field, in an immense marquee, presided over by Earl Beattie, and which contained nearly all the principal breeders of the kingdom. In responding to the toast of his health, Mr. Cochrane said two reasons induced him to send his stock to England for sale. In the first place, his herd was getting too large; in the second, he needed money, and the credit system which prevailed across the Atlantic at present forbade a ready-money sale there.

The day was beautifully fine, and the cattle showed to the best advantage. The greatest excitement prevailed during the sale of the Third and Fifth Duchesses of Hillhurst, the contests being between Mr. Loder and the Earl of Beattie, each of whom carried off one. When the first of these fine cows, a beautiful red, came into the ring, 1,000 guineas were at once offered, and after some spirited bidding the sand ran out at Mr. Loder's bid of 4,100 guineas, and Mr. Thornton declared that the cow was the highest-priced one in England. She was not destined to remain so long, however; for, when Fifth Duchess of Hillhurst came into the ring, Lord Beattie was evidently determined not to let Mr. Loder have her also, and, after his bid of 3,300 guineas had been capped by one of 3,500, his lordship advanced 1,000 on his previous offer, and the cow was his for 4,500 guineas, the highest price ever made with one exception—that of the 7,000 guineas Duchess sold at the famous sale at New York Mills. For critical notes of the sale we must refer our readers to "Live Stock Notes." The following is the sale list:

COWS AND HEIFERS.

The figures refer to "Cotes' Herd Book," except those in brackets, which refer to the American Herd Book.

Vernal Star, red and white, calved April 23, 1866; sire The Suther 23061, dam Venus Star by Prince George 13510.—Mr. A. Darby, Shropshire, 400 gs.
Killerby Queen, roan, calved in July, 1867; sire Brigade Major 21312, dam Clara by Fitz-Clarence 14552.—Mr. John Torr, M.P., Aylesbury, 41 gs.
White Rose, white, calved March 7, 1868; sire Mountain Chief 20383, dam British Rose by Prince George 13510.—Rev. T. Stanforth, Storr's Hall, 300 gs.
Queen of Beauty, red and white, calved April 4, 1868; sire Knight Errant 18154, dam Queen of the Glen by Velasco 15443.—Mr. J. B. Booth, Killybeg, 120 gs.
Bright Lady, roan, calved April 6, 1868; sire Lord Blithe 23128, dam Bright Countess by Brunet Plate 19337.—Mr. Torr, M.P., Aylesbury, 330 gs.
Rosedale 3rd, roan, calved February 24, 1869; sire Royal Buckingham 20712, dam Rosey by Master Belville 11795.—Mr. Topping, Skelton, 63 gs.
British Queen, roan, calved December 1, 1869; sire Sovereign 27538, dam British Maid by British Prince 16197.—Rev. T. Stanforth, Storr's Hall, 240 gs.
Royal Rose, white, calved November 17, 1870; sire Royal Briton 27351, dam White Rose by Mountain Chief 20383.—Mr. A. Metcalfe, Ravenstonedale, 66 gs.
Her heifer calf.—Mr. Metcalfe, 40 gs.

Welcome Lady, light roan, calved December 30, 1870; sire Banner Bearer 27907, dam Lady of the Lake by Knight Errant 18154.—Mr. J. B. Booth, 200 gs.

Her bull calf.—Mr. J. B. Booth, 26 gs.

Vesper Star, red and little white, calved May 13, 1871; sire Sir Windsor Broughton 27407, dam Star Queen by The Suther 23061.—Mr. T. Crook, Co. Kerry, Ireland, 1,600 gs.
Baroness Conquer (Mr. Beattie's), roan, calved September 16, 1871; sire Baron Killerby 27949, dam Sylvia by Champion 23529.—Mr. C. H. Cook, Barnet, 60 gs.

Welfare, red and white, calved January 6, 1873; sire Royal Commander 29557, dam Woad Blue by Lord Blithe 22128.—Mr. J. Torr, M.P., 105 gs.

Statira, roan, calved July 5, 1873; sire Royal Blithe [12644], dam Star Flower by Eleventh Duke of Thordale 21024.—Mr. Richardson, Penrith, 66 gs.

Tacita 4th (Mr. Beattie's), white, calved August 23, 1873; sire Oxford Bess 2nd 33012, dam Tacita 2nd by Third Duke of Clare 23729.—Mr. Mansel, The Oaks, Cumberland, 21 gs.

Second Princess of the Valley, roan, calved October 25, 1873; sire Second Baron Marley [12427], dam Denmark 2nd by Millbeck 24551.—Mr. Skelton, Braithwaite, 130 gs.

Her heifer calf.—Mr. Halford, Market Harborough, 45 gs.

Winifred, red, calved March 15, 1874; sire Cavalier [18085], dam Welfare by Royal Commander 29557.—Mr. J. Pay, Ireland, 100 gs.

Forty-first Duchess of Goodness (Mr. Beattie's), red, calved May 19, 1874; sire Eleventh Duke of Geneva [2643], dam Twenty-fifth Duchess of Goodness by Fourteenth Duke of Thordale 22459.—Lord Beattie, Underley, 305 gs.

Lady Sale of Burlington 2nd (Mr. Beattie's), red and white, calved May 29, 1874; sire Franklin Boy [11983], dam Lady Sale of Burlington by Climax [1443].—Sir J. Seaburn, Newcastle-on-Tyne, 51 gs.

Queen Bess, white, calved May 13, 1875; sire Louis le Grand [17610], dam British Queen by Sovereign 27538.—Mr. Rhodes, Pontefract, 63 gs.

Warwick, white, calved May 18, 1875; sire Royal Commander 29557, dam Royal Rose by Royal Briton 27351.—Mr. Smith, Gooles, Yorkshire, 76 gs.

Third Tuberoses of Fairview (Mr. Beattie's), red and white, calved September 20, 1875; sire Second Duke of Oundle 33703, dam First Tuberoses of Brattleboro' by Sheridan [6179].—Mr. Bragg, M.P., Helms Island, 115 gs.

Marchioness of Barrington, roan, calved November 11, 1875; sire Grand Duke 23rd 34062, dam Grand Duchess of Barringtonia by Eighteenth Duke of Oxford 25996.—Sir W. H. Salt, Leicestershire, 800 gs.

Third Duchess of Hillhurst, red, calved December 25, 1875; sire Second Duke of Hillhurst, dam Tenth Duchess of Airdrie by Royal Oxford 18774.—Mr. Loder, Whitebury, Towcester, 4,100 gs.

Lady Rosedale, red and little white, calved October 23, 1875; sire Sirina, dam Rosedale 3rd by Royal Buckingham 20712.—Mr. Whyte, Aldborough, Darlington, 73 gs.

Tacita 5th (Mr. Beattie's), white, calved January 13, 1876; sire Oxford Bess 2nd 33012, dam Tacita 3rd by Third Duke of Clare 23729.—Mr. W. Ashburner, Ulverston, 145 gs.

Vesper Queen, roan, calved March 7, 1876; sire Royal Commander 29557, dam Vernal Star by The Suther 23061.—Mr. A. Darby, Shropshire, 700 gs.

Baroness Conquer 2nd (Mr. Beattie's), roan, calved April 27, 1876; sire Royal Cherub [20696], dam Baroness Conquer by Baron Killerby 27949.—Mr. Cook, Barnet, 31 gs.

Stella, red and little white, calved April 24, 1876; sire Sirina, dam Statira by Royal Blithe [12644].—Mr. B. Wilson, Haverham, Westmorland, 35 gs.

Fifth Duchess of Hillhurst, red, calved May 1, 1876; sire Second Duke of Hillhurst, dam Airdrie Duchess by Fourteenth Duke of Thordale 22459.—Lord Beattie, Underley, 4,300 gs.

Princess of Vermont, roan, calved May 10, 1876; sire Royal Oxford (18412), dam Blossom 2nd by Franklin Boy (11963).—Sir J. Swinburne, 41 gs.

Airdrie Gwynne (Mr. Beattie's), roan, calved May 16, 1876; sire Twenty-third Duke of Airdrie (19393), dam Modern 6th by Edipus (1501).—Mr. Holford, 63 gs.

Double Rose 1st (twin to Double Rose 2nd), light roan, calved June 23, 1876; sire Sirius, dam Royal Rose, by Royal Briton 27351.—Mr. Peare, Lincolnshire, 71 gs.

Double Rose 2nd (twin to Double Rose 1st), dark roan, calved June 23, 1876; sire Sirius, dam Royal Rose by Royal Briton 27351.—Mr. Peare, 82 gs.

Lady Sarnise, roan, calved June 26, 1876; sire Second Duke of Hildhurst, dam Sarnise Duchess 5th by Grand Duke of Geneva 28756.—Sir W. Selt, 400 gs.

Roeland, red and white, calved September 14, 1876; sire Sirius, dam Rosedale 3rd by Royal Buckingham 20718.—Mr. Darling, Durham, 31 gs.

Vesper Princess, red, calved January 21, 1877; sire Cumberland, dam Vesper Star by Sir Windsor Beoughton 27807.—Mr. Whyte, 206 gs.

Baroness Conyers 3rd (Mr. Beattie's), red, calved May 23, 1877; sire Lord Brighteyes, dam Baroness Conyers by Baron Killibry 27949.—Mr. Coe, Barnet, 20 gs.

BULLS.

Second Duke of Hildhurst, red and white, calved July 17, 1871; sire Sixth Duke of Geneva 30859, dam Duchess 97th by Third Duke of Wharfedale 21419.—Mr. Longman, Hemel Hempstead, 800 gs.

Cumberland, red, calved March 13, 1875; sire Sirius, dam Queen of Beauty by Knight Errant 18154.—Mr. Topham, 61 gs.

Baron Ayleby, red, calved March 8, 1876; sire Royal Commander 26457, dam Bright Lady by Lord Blythe 23126.—Rev. T. Stanforth, Storr's Hall, Wiltshire, 355 gs.

Brigadier, roan, calved March 24, 1876; sire Sirius, dam British Queen by Sovereign 27538.—Mr. Dudding, Lincolnshire, 46 gs.

Killibry Star, red, calved September 9, 1876; sire Sirius, dam Killibry Queen by Brigado-Major 21312.—Mr. W. Lambert, 40 gs.

Earl of Annon (Mr. Beattie's), red, calved March 2, 1877; sire Twenty-third Duke of Airdrie (19393), dam Yucita 4th by Oxford Bean 2nd 33013.—Mr. Harrison, 5 gs.

The following Heifer and two Bulls, the property of E. W. Mauds-Waldo, Esq., Kent, were sold after the above.

Water Lady, roan, calved March 23, 1876; sire Mr. Booth's Lieutenant-General 31600, dam Waterloo 27th by Prince Bertram 27119.—Mr. Holford, 40 gs.

Fitz-Rufus, roan, calved March 6, 1876; sire Mr. Booth's King Rufus 34351, dam Flower Bloom (bred at Aylesby) by Blinkhoolie 23423.—Mr. R. Fisher, Leconfield, 44 gs.

Guardian, red, calved April 7, 1876; sire Mr. Booth's King Rufus 34351, dam Guidage (bred at Aylesby) by Blinkhoolie 23423.—Mr. Lofthouse, 50 gs.

SUMMARY.

	£	s.	d.		£	s.	d.
87 cows and heifers averaged	493	15	0½	.....	15,641	17	0
6 bulls	238	19	8	.....	1,361	17	0
43 animals	395	8	8	.....	17,003	14	0

REV. T. STANFORTH'S SALE.

The weather, on Wednesday, was again beautifully fine, and most of the attendants at Tuesday's sale assembled at Storr's Farm. Luncheon was served in the marquee, which had done service on the previous day, though the gathering was, perhaps, not quite so large. Earl Beattie again presided, and some 300 to 400 guests sat down. The Rev. T. Stanforth proposed the health of the Queen, and the remainder of the toasts were: "The health of Mr. Stanforth," by Mr. T. C. Booth; "The Strangers," by Mr. Torr, M.P.; responded to by Mr. Cochrane; "Mr. Thoroton," by Mr. Jacob Wilson. The company then went to the sale-ring; but the glamour of the "blue blood" had departed, and the whole of Mr. Stanforth's animals, which, with but some three exceptions, were nice, level animals, failed to reach the price of one of the

Duchesses of Hildhurst, sold the previous day. The following is a list of the animals, their prices, and purchasers:

COWS AND HEIFERS.

Princess Gwynne, roan, calved November 17, 1869; sire Knight of Stanton (24375), dam Daisy Gwynne by Sir Windsor (22927).—Mr. Holt-Bevor, Herefordshire, 40 gs.

Her bull calf.—Mr. Rhodes, 16 gs.

Frances 9th, roan, calved February 15, 1870; sire Prince Christian (22581), dam Frances 5th by King of Diamonds (20063).—Mr. Atkinson, Rochdale, 35 gs.

Cressida 4th A 1, roan, calved June 9, 1870; sire Peer of the Realm (27067), dam Cressida 4th A by Grenadier (21876).—Mr. Topham, Wragby, 61 gs.

Lady of the Moor, roan, calved February 5, 1873; sire England's Glory (23889), dam Lady of the Manor by British Crown (21233).—Mr. Walsh, Kent, 100 gs.

Her bull calf.—Mr. Dargan, Clifton, 22 gs.

Blooming Daisy, red and white, calved March 19, 1873; sire Blood Royal (23047), dam Elina by Mac Turk (14873).—Mr. D. Beattie, Annon, 78 gs.

Good Manners, red and white, calved June 11, 1873; sire Prince Christian (22581), dam Ladylike 4th by Ravensper (20638).—Mr. Pury, Ireland, 300 gs.

Lady of the Mansion (twin to Lady of the Moor), roan, calved January 9, 1873; sire High Sheriff (26328), dam Lady of the Manor by British Crown (21233).—Mr. Phillips, Staffordshire, 226 gs.

Lady of the Moor (twin to Lady of the Mansion), roan, calved January 9, 1873; sire High Sheriff (26328), dam Lady of the Manor by British Crown (21233).—Mr. Phillips, Staffordshire, 190 gs.

Rowena Gwynne, red and white, calved November 30, 1873; sire Knight of Killibry (23000), dam Regina Gwynne by Count of the Realm (23640).—Mr. Kennedy, Ulverston, 40 gs.

Lady Elina, roan, calved December 17, 1874; sire Knight of Knowlmore 2nd (21546), dam Lady Bath by The Suttler (23061).—Mr. Barnyard, Isle of Man, 70 gs.

Seclusion, roan, calved March 3, 1875; sire Judge of Assize (24880), dam Probation by High Sheriff (26328).—Mr. A. Mitchell, Alton, 67 gs.

Edy of the Vale, white, calved March 30, 1875; sire Knight of Knowlmore 2nd (21546), dam Elina by Mac Turk (14873).—Mr. Beattie, Annon, 64 gs.

Reimant, white, calved December 20, 1875; sire Royal Broughton (27343), dam Novice by Monk (11224).—Mr. Mauds-Waldo, Kent, 46 gs.

Rose of Lindeth, red and white, calved February, 19, 1874; sire Royal Broughton (27343), dam Roseberry by Baron Killibry (23364).—Mr. L. C. Crisp, Northumberland, 175 gs.

Frances 10th white, calved October 26, 1874; sire Royal Broughton (27343), dam Frances 9th by Prince Christian (22581).—Mr. C. Wilson, Oxenholme, 36 gs.

Lady Knowlmore, roan, calved January 14, 1875; sire Knight of Knowlmore 2nd (21546), dam Lady Blythe by Lord Blythe (26126).—Mr. Foljambe, Osberton, 226 gs.

Sister Mabel, red and white, calved April 8, 1875; sire T. C. B. (25722), dam Sister Marion by High Sheriff (26328).—Baron Von Schroeder, Nantwich, 46 gs.

April Feggathorpe, red and white, calved April 11, 1875; sire T. C. B. (25722), dam October Feggathorpe by High Sheriff (26328).—Mr. F. Smyth, Salop, 81 gs.

Good Behaviour, red and white, calved April 19, 1875; sire T.C.B. (25722), dam Good Manners by Prince Christian (22581).—Mr. J. Torr, M.P., Aylesby, 130 gs.

May Day Gwynne, red and white, calved May 1, 1875; sire British Knight (23320), dam Princess Gwynne by Knt. of Stanton (21375).—Mr. Rhodes, Pontefract, 54 gs.

Cressida 4th A 3, roan, calved June 10, 1875; sire Judge of Assize (24880), dam Cressida 4th A by Grenadier (21876).—Mr. Foljambe, 51 gs.

Alina, red and white, calved November 6, 1875; sire T.C.B. (25722), dam Alina by High Sheriff (26328).—Mr. F. Smyth, 51 gs.

Sincerity, roan, calved February 17, 1876; sire K.C.B. (26455), dam Sobriety by High Sheriff (26328).—Col. Williamson, Lurgan, 54 gs.

Lady of the Manor, roan, calved June 22, 1876; sire Corydon (33450), dam Lady of the Mansion by High Sheriff (26393).—Mr. Phillips, 125 gs.
 Miss York, roan, calved July 7, 1876; sire Macedon (34716), dam Lady Mayoresa of York by Emperor of the North (23883).—Mr. A. Mitchell, Alloa, 56 gs.
 Sister Agatha, roan, calved July 11, 1876; sire Agathon (33916), dam Sister Marion by High Sheriff (26392).—Mr. Marshall, Coniston, 33 gs.
 Naanie Gwynne, red and white, calved August 9, 1876; sire British Knight (33220), dam Rowena Gwynne by Knt. of Killerby (29000).—Mr. A. Graham, Yarmouth, 26 gs.
 Hero's Pride, red and white, calved January 29, 1877; sire British Hero (30604), dam Soldier's Pride by Grenadier (21976).—Mr. W. Robinson, Ulverston, 50 gs.
 Hermitage, roan, calved May 9, 1877; sire Sir Wilfrid (27484), dam Seclusion by Judge of Amble (34280).—Mr. J. Wilson, Morpeth, 49 gs.

BULLS.

British Knight (33220), roan, calved December 5, 1873; sire Knight of the Shire (26552), dam British Girl by Ravenspar (20638).—Mr. W. Mayne, Isle of Man, 126 gs.
 Lord of the Moor (36991), red, calved November 18, 1875; sire T.C.B. (35722), dam Lady of the Moor by High Sheriff (26392).—Mr. Wakefield, Kendal, 47 gs.
 Knight of Windermere, roan, calved September 17, 1876; sire K.C.B. (26492), dam Rose of Windermere by Lord Blithesome (29067).—Mr. Greenwood, Yorkshire, 135 gs.
 Frankenthal, roan, calved January 17, 1877; sire British Knight (33220), dam Frances 9th by Prince Christian (24581).—Mr. Marshall, Coniston, 31 gs.
 Probationer, roan, calved January 30, 1877; sire British Hero (30604), dam Probation by High Sheriff (26392).—Mr. Rhodes, 38 gs.
 Titanus, white, calved May 1, 1877; sire Titan (35805), dam Lady Elina by Knight of Knowinsare 2nd (31542).—Mr. Darling, Durham, 16 gs.
 Marathon, roan, calved July 9, 1877; sire Royal Benedict (27348), dam Cre-aida 4th 1 by Peer of the Realm (27087).—Mr. B. Jefferson, Preston Howe, 23 gs.
 King of Anson, roan, calved July 13, 1877; sire King James (28971), dam Blooming Daisy by Blood Royal (28047).—Mr. A. Graham, Yanwath, 25 gs.

SUMMARY.

	s.	s.	d.		s.	s.	d.
29 cows and heifers averaged	93	11	0	...	2,718	4	0
8 bulls	57	16	0	...	462	0	0
37 animals	85	16	2½	...	3,175	4	0

MESSRS. ASHBURNER AND LODGE'S SALE.

On Thursday, Mr. Thornton completed his three days' engagement in the North, and most of the company who had attended at the Lake sales were present. Luncheon was presided over by Mr. Starkie, M.P., who gave the customary toasts, and the guests went to the sale ring, when there were offered selections from the herds of Mr. W. Ashburner, Coniahed-grange, Ulverston; Mr. Lodge, Bishopdale, Yorkshire; and Mr. George Ashburner, Low Hall, near Ulverston. Mr. Ashburner was unfortunate in having three doubtful breeders in his lot, and those, though of "blue-blood" pedigree, went for butchers' prices in consequence. Mr. Alsop was the principal bidder, and took all the highest-priced animals of the sale.

We append the result.

COWS AND HEIFERS.

Antonia (Mr. Lodge's), red and white, calved January 16, 1867; sire Duke of Darlington (21580), dam Antoinette by Fourth Duke of Thorndale (17750).—Mr. Sheldon, Brailles, 75 gs.
 Cherry Duchess 13th (Mr. Ashburner's), red, calved March 16, 1868; sire Third Duke of Wharfedale (21619), dam Cherry Duchess 9th by Marquiduke (14897).—Mr. Lash, Ulverston, 43 gs.
 Waterloo Duchess 4th (Mr. Lodge's), roan, calved February 22, 1869; sire Thirteenth Duke of Oxford (21604), dam

Waterloo 19th by Grand Duke 2nd (18961).—Mr. Brogden, M.P., Ulverston, 40 gs.
 Lally 12th (Mr. Ashburner's), roan, calved May 21, 1869; sire Third Duke of Claro (33739), dam Lally 6th by Third Lord Oxford (22200).—Mr. Longman, Hertfordshire, 40 gs.
 Wild Eyes 30th (Mr. Ashburner's), red and white, calved June 12, 1869; sire Don John (19583), dam Wild Eyes 27th by Gainsford 5th (18013).—Mr. Lovett, Beshbury, Wolverhampton, 48 gs.
 Waterloo 29th (Mr. Ashburner's), red and white, calved November 30, 1870; sire Grand Duke of Lightburne 2nd (26291), dam Waterloo 26th by Ravenspar (20628).—Mr. Cook, Hertfordshire, 51 gs.
 Aninga (Mr. Lodge's), red, calved December 25, 1871; sire Eighteenth Duke of Oxford (25995), dam Antonia by Duke of Darlington (21586).—Colonel Gunter, Wetherby, 80 gs.
 Fuchsia 13th (Mr. Ashburner's), roan, calved February 15, 1872; sire Duke of Albany (25931), dam Fuchsia 10th by Grand Duke of York (24017).—Mr. Drewry, Holker, 110 gs.
 Duchess 19th (Mr. Ashburner's), roan, calved March 18, 1872; sire Barrington Oxford (25607), dam Duchess 8th by Grand Duke of Lancaster (19583).—Mr. Masick, Cumberland, 100 gs.
 Mild Eyes 4th (Mr. Ashburner's), roan, calved November 10, 1873; sire Royal Lancaster (29370), dam Mild Eyes 3rd by Fourth Duke of Thorndale (17760).—Mr. Alsop, Worcestershire, 610 gs.
 Grand Duchess of Oxford 25th (Mr. Ashburner's), white, calved November 30, 1873; sire Baron Oxford 4th (25589), dam Grand Duchess of Oxford 15th by Grand Duke 7th (34044).—Mr. Longman, 81 gs.
 Oxford Minstrel (Mr. Ashburner's), roan, calved February 6, 1873; sire Oxford-le-Grand (29496), dam Park Minstrel by Hamatite (21917).—Mr. Lovett, 79 gs.
 Wild Eyes 24th (Mr. Ashburner's), red and little white, calved June 25, 1873; sire Bramble 2nd (26259), dam Wild Eyes 30th by Don John (19583).—Mr. Baxter, Middlesex, 63 gs.
 Waterloo Duchess 5th (Mr. Lodge's), roan, calved July 23, 1874; sire Fifth Duke of Wetherby (31033), dam Waterloo Duchess 4th by 13th Duke of Oxford (21604).—Mr. Alsop, 370 gs.
 Antonia 2nd (Mr. Lodge's), red and white, calved January 20, 1875; sire Baron Oxford 3rd (25579), dam Antonia by Duke of Darlington (21586).—Colonel Gunter 130 gs.
 Royal Gwynne (Mr. Ashburner's), roan, calved March 21, 1875; sire 22nd Duke of Oxford (21000), dam Ros Gwynne 2nd by Royal Cambridge (25009).—Mr. Alsop, Worcestershire, 430 gs.
 Rose of Lightburne 3rd (Mr. Ashburner's), roan, calved April 11, 1875; sire Grand Duke of Kent 2nd (28759), dam Elvira 2nd by Eighth Duke of Oxford (15939).—Hon. C. Duncan, Yorkshire, 105 gs.
 Cherry Oxford 4th (Mr. Ashburner's), roan, calved September 13, 1875; sire Second Duke of Gloucester (28392), dam Cherry Oxford by Thirteenth Duke of Oxford (21604).—Mr. Botterill, 80 gs.
 Princess Alice (Mr. Lodge's), roan, calved November 12, 1875; sire Eighteenth Duke of Oxford (25995), dam Princess Royal by Duke of Athelstane (21562).—Mr. Lovett, 74 gs.
 Bright Eyes 6th (Mr. Ashburner's), white, calved January 30, 1876; sire Baron Oxford 4th (25580), dam Bright Eyes 4th by 3rd Duke of Wharfedale (21619).—Mr. Alsop, 780 gs.
 Wild Eyes 37th (Mr. Ashburner's), roan, calved April 23, 1876; sire Lord Darlington 8th (34520), dam Wild Eyes 30th by Don John (19583).—Mr. Lovett, 120 gs.
 Beverley Duchess 8th (Mr. Ashburner's), roan, calved May 16, 1876; sire Oxford-le-Grand (29496), dam Miss Beverley 4th by Van Thol (22755).—Mr. Beaumont, Northamptonshire, 96 gs.
 Roan Duchess 2nd (Mr. Ashburner's), roan, calved October 12, 1876; sire Second Duke of Gloucester (28392), dam Roan Duchess by Barrington Oxford (25607).—Mr. Baxter, 38 gs.
 Rosabella 3rd (Mr. Ashburner's), roan, calved March 13, 1877; sire King Henry (26842), dam Rosabella 2nd by Hyperion (21266).—Mr. Robinson, Ulverston, 30 gs.

Jessy Princess 5th (Mr. Ashburner's), roan, calved March 27, 1877; sire Second Duke of Glo'ster (28392), dam Jessy Princess 2nd by King of Oude (26565).—Mr. Horsfall, Burnley, 21 gs.
 Conshead Waterloo (Mr. Ashburner's), roan, calved April 25, 1877; sire Second Duke of Glo'ster (28392), dam Waterloo 29th by Grand Duke of Lightburne 2nd (26294).—Mr. Cock, 55 gs.
 Conshead Fuchsia (Mr. Ashburner's), red, calved June 1, 1877; sire Twenty-fourth Duke of Airdrie (26460), dam Fuchsia 15th by Duke of Albany (26931).—Mr. Alsop, 170 gs.
 Conshead Wild Eyes (Mr. Ashburner's), white, calved June 10, 1877; sire Twenty-fourth Duke of Airdrie (26460), dam Bright Eyes 5th by Royal Lancaster (26870).—Mr. Alsop, 610 gs.

BULLS.

Second Duke of Glo'ster (28392) (Mr. Ashburner's), roan, calved in November, 1870; sire Seventh Duke of York (17754), dam 11th Duchess of Geneva by Baron of Oxford (28371).—Not sold, reserved at 750 gs.
 Prince of Waterloo 2nd (Mr. Lodge's), white, calved August 31, 1876; sire Fourth Duke of Clarence (23597), dam Waterloo Duchess 5th by 5th Duke of Wetherby (21038).—Mr. R. Harrett, Northumberland, 50 gs.
 Prince of the Vale (Mr. Lodge's), roan, calved January 1, 1877; sire Fourth Duke of Clarence (23597), dam Princess Royal by Duke of Athlone (21562).—Mr. W. Slater, Ulverston, 30 gs.
 Prince of the Valley (Mr. Lodge's), roan, calved January 1, 1877; sire Fourth Duke of Clarence (23597), dam Princess Royal by Duke of Athlone (21562).—Mr. Riley, Ulverston, 23 gs.
 Lally Duke (Mr. Ashburner's), white, calved October 11, 1876; sire Second Duke of Glo'ster (28392), dam Lally Duchess by Grand Prince of Claro (28781).—Mr. Lovett, 58 gs.
 Conshead Prince (Mr. Ashburner's), roan, calved January 16, 1877; sire 24th Duke of Airdrie (26460), dam Fuchsia 14th by Duke of Albany (26931).—Mr. R. C. Naylor, Northamptonshire, 51 gs.
 Conshead Duke (Mr. Ashburner's), white, calved February 1, 1877; sire 24th Duke of Airdrie (26460), dam Mild Eyes 4th by Royal Lancaster (26870).—Mr. Graham, Hertfordshire, 58 gs.
 Airdrie Duke (Mr. Ashburner's), roan, calved February 28, 1877; sire 24th Duke of Airdrie (26460), dam Bright Eyes 4th by 3rd Duke of Wharfedale (21619).—Mr. Alsop, 52 gs.
 Sir Clifford (Mr. Lodge's), roan, calved March 7, 1877; sire Fourth Duke of Clarence (23597), dam Antonia by Duke of Darlington (21586).—Mr. Hetherington, Kendal, 28 gs.
 Conshead Duke 2nd (Mr. Ashburner's), roan, calved March 17, 1877; sire Derwent Duke, dam Wild Eyes 30th by Don John (19583).—Mr. Rigg, Grange-over-Sands, 19 gs.

SUMMARY.

	E. s. d.			£. s. d.		
38 Cows, heifers, and calves averaged	167	9	6	4,889	6	0
9 Bulls averaged	38	7	8	345	9	0
37 Animals averaged	136	1	6	5,034	15	0

The following animals are the property of Mr. George Ashburner:—

Ruby 9th, red, calved in January, 1865; sire Oxford (20449), dam Ruby 7th by Valentine (17161).—Mr. Massicks, Cumberland, 28 gs.
 Blanche, red and little white, calved April 20, 1868; sire General Napier (24028), dam Blancheover by May Duke 2nd (18372).—Mr. Woodhouse, Lancaster, 37 gs.
 Waterloo 28th, red, calved June 1, 1870; sire Prince Bertram (27119), dam Waterloo 22nd by Speculator (18775).—Mr. Horsfall, Brierfield, 44 gs.
 Maria 7th, roan, calved in November, 1871; sire Sockburn Lad (20024), dam Maria 3rd by Oxford (20449).—Mr. Barker, Kirkby Stephen, 45 gs.
 May Ruby, red and white, calved May 25, 1876; sire Duke of Oxford (21004), dam Red Ruby by Oxford (20449).—Mr. Massicks, 31 gs.

Oxford Maria, roan, calved August 31, 1876; sire Duke of Oxford (21004), dam Maria 7th by Sockburn Lad (20024).—Mr. Ashcroft, 27 gs.

Cherry Maria, roan, calved October 15, 1876; sire Cherry Duke of Lightburne (26349), dam Red Maria by Grand Duke of Lightburne 3rd (28761).—Mr. W. Mason, Grange, 13 gs.

Cherry Ruby, roan, calved February 8, 1877; sire Cherry Duke of Lightburne (26349), dam Duchess of Oxford by Sockburn Lad (20024).—Mr. Cock, 15 gs.

Cherry Ruby 2nd, roan, calved February 27, 1877; sire Cherry Duke of Lightburne (26349), dam Ruby 9th by Oxford (20449).—Mr. Bownes, Ambleside, 21 gs.

Waterloo Banner, red, calved December 20, 1876; sire Banner Bearer (27907), dam Waterloo 28th by Prince Bertram (27119).—Mr. W. Robinson, Arrad Foot, 15 gs.

Mr. George Ashburner's ten animals realised a total of 4286 15s.

HARVEST PROSPECTS IN SCOTLAND.—Now that the product of this year's harvest can be estimated with something like certainty it is feared that all the gloomy forebodings that have of late been indulged in will prove too near the truth. In the earlier districts of Fife and the Lothians a beginning has been made with the cutting of barley and oats; and it is being ascertained in many places that, while the quality is of the inferior nature anticipated, the bulk of oats, at all events, will not be up to promise. On wheat, again, the loss threatens to be even more serious than was a week ago looked for. In East Lothian complaints as to this cereal are particularly loud, it being stated that the heads are so badly filled that the yield at most can only be about a third of a full crop. In the neighbourhood of Edinburgh the state of matters is reported to be less disappointing; but even there it is thought that careful inspection of the fields would show that only in favoured localities will farmers be much better off. As regards potatoes the most discouraging reports also come from East Lothian. In Mid Lothian, where the crop is of course later, the tubers are, thanks to recent bracing weather, still keeping in wonderfully sound condition, though disease has here and there made itself too apparent, having, for example, reduced the yield of Dalmahoys in a field about five miles west of Edinburgh to two tons an acre—a poor substitute for the seven tons which would have constituted a good crop. In East Lothian, however, disease is said to be very widespread, and this among fields which at their best would have given only half of a full return.—*Morning Post.*

FARMING PROSPECTS IN AUSTRALIA.—The farming prospects continue as bright as ever. Never in the history of the colony has there been a more favourable season for the cultivators of the soil. Copious rains, intermingled with days of sunshine, have produced a richness of growth such as has never been surpassed. This is not the case in one district only, but throughout the colony. From the extreme South to the furthestmost outpost of agricultural settlement in the North the fields are clothed with a luxuriance of vegetation which awakens hopes of an abundant harvest. It is much too early as yet to count upon the result of the ingathering which will take place at the end of the year; but if the prospects of the present remain unalighted there will be a surplus of bread-stuffs for export far exceeding anything as yet known in the annals of South Australia. The weather has been equally propitious for the squatter, who requires some little encouragement in view of the dispiriting results of his operations during the past year or two. In mining, unfortunately, there is much depression; owing to the persistently low price of copper. Numbers of men at Waltham have been thrown out of employment, and several have gone to New Caledonia under engagement to work at the mines there. The Mesta for the first time for many years has omitted the payment of the quarterly dividend, and operations at most of the smaller properties are being prosecuted in only a languid way. In all other respects, however, the outlook is satisfactory and trade is in a fairly buoyant state.—*South Australian Register.*

FARMING IN THE EAST RIDING OF YORKSHIRE.

At the present time, when our supply of corn for the coming twelve months must be a subject of general anxiety, it may be interesting to those in other parts of the country to learn something of the harvest prospects in the north-eastern district of Yorkshire, which is quite a corn-producing country.

Agriculture is carried on here under certain natural advantages, which, doubtless, contribute considerably towards the excellent results attained; there are rich clay loams, producing fine crops of wheat, and a large proportion of lighter soil well suited for roots and barley; there are tracts of land almost, or quite naturally, free from hedgerow timber, so often a cause of loss to the farmer. We wish we could see landlords more indulgent to their tenants about such trees. In many cases they might be removed with great advantage to the fields, and even to the general appearance of the estate. We know however, too well that natural advantages may co-exist with very poor crops, and we must take into consideration other causes which lead to the very creditable crops produced. For this we must look back a good many years to the time when much of the land, now let at 26s. per acre and higher, was but 2s. 6d. per acre, and, even within the memory of tenants now living, 6s. per acre, and wheat higher than it is now. It was in such times that money was made by farming and put by, and it is the money then saved which enables the man of the present day to carry on the high farming which will alone enable this generation to make a respectable living by agriculture. Capital must be laid out on improved buildings, on drainage, on steam power, and all the latest inventions for saving labour, and on the producing of natural and the purchase of artificial manures, by which only the farmer can produce the large proportion of corn crops now necessary to his very existence. Landlords do much, and might do more, but often they have not the means, and some of these agencies to high farming it is the business of the tenant to procure. For all this capital is required, and this capital is supplied in very many cases by tenants whose fathers have made money in years past, and whose families have often held their farms from generation to generation.

Yet even these men cannot always make a living in the present day; and there are such cases, among the best farmers, as a man losing more in one year than he can make in the following three. Such examples should make landlords pause before attempting, as is too common, to raise their rents without due reflection, and so run the risk of losing tenants who take an interest in farms as if they were their own, only to gain those whose only object it is to drain out everything they can, and then move on to do the same elsewhere. Let the landlord take care, when he contemplates increasing his rents, that the farm will fairly bear the increase, and that a living can still be made out of the land; and he can do this only by employing a valuer who understands his business, and not a man whose only experience has perhaps been in collecting rents. Let landlords think, too, whether it is not possible to reduce expenditure in the place of increasing revenue.

The harvest must no doubt be very late. In this district a full fortnight later than usual will be the rule; and this will bring us to a time of year when even less dependence can be placed on the weather than at our usual harvest season; add to this the wet and uncertain summer, which shows every prospect of keeping up its character to the end, and it will be evident that this year, more than is usually the case, the price of corn will depend on the weather of the next six weeks.

Should we be fortunate in this respect, the farmer's labour in this district will not be thrown away, as the crops look very healthy, and in most cases there is every prospect of a good yield. Though no great reliance can be placed on what must be guess-work, some of the finest crops will probably give five, six, and eight quarters per acre for wheat, barley, and oats respectively, and it is by such crops alone that the farming we see here can be made to pay. Fields are kept so free from weeds, and the fences are so trim and regular, that the farms have the appearance of garden cultivation, and this where 50-acre fields are common, and where we even saw one of 75 acres. This is surely argument enough against small holdings and every man having his own acre, of which we have heard

so much. How much would be lost in fences alone were this 75 acres given to seventy-five cottages? Even with hand-tillage, the produce could hardly be greater. Who would encourage steam appliances and all agricultural improvements if large farms such as these, some of them from 1,000 to 2,000 acres, were done away with? That there may be bad farming on large farms and good land we all know; but if any one wishes to see what may be done with capital on a large scale, let him see this district.

The labourers, too, are better than if they attempted to cultivate a plot each for himself. Many keep a cow, and gain the advantage of the pasture, of which there is generally a fair strip on either side of the high road, and which they are allowed to graze without rent; and, with the help of a pig, a good garden and cottage, and liberal wages, they can live very comfortably if they keep from the public-house.

The fences are certainly a prominent feature. Blackthorn flourishes, and every advantage is taken of it. Hedge-trimming is reduced to an art, so even and compact are the fences, the secret being to keep them broad at the bottom, and cut to a point at the top. Sheep cannot then reach the upper part and destroy the young wood, and the droppings in wet weather do not fall from the upper shoots and injure them below. Immediately under the fence two rows of potatoes are often planted, which saves waste of land, and, above all, prevents the growth of weeds, which in most parts of the country had a regular nursery in the hedgerows.

Turnips look well, and they certainly have every chance, as hardly a weed is to be seen. In a few places there are signs of "leggers and toes," attributed to the land not bearing so frequent a repetition of the crop; but, as a rule, they are strong and forward. They are always sown on the flat, which is said to facilitate weeding and chaffing, and certainly saves labour where it can be followed with advantage.

Peas are frequently sown alternately in the rotation with clover, to prevent clover sickness; they will give a large yield, but many fields are a good deal blighted, and this blight we observed to be in some way connected with the fall of honey-dew. Beans are found to be a very uncertain crop, and are not grown.

Seeds invariably look well, and we are glad to find that ryegrass is never mixed with the clover; being of the same nature as a corn crop, it is manifestly unfair to the land to sow it with clover, as in a great measure it destroys the advantage of the fallow crops. Seeds are often sown down with oats, and even wheat, the rotation varying with the nature of the land, and the old four-course being by no means strictly followed. One landowner has foolishly restricted his tenants from having two corn crops in succession without special leave from himself; such antiquated regulations are, however, almost unknown, and tenants are allowed to crop as much as they like, so long as results show they farm well. Such examples as turnips followed by oats, barley, peas, wheat and wheat, turnips, wheat, seeds, wheat, are not unknown. Tenants are not allowed to sell straw, and as it is so plentiful, it is used extravagantly; a good tenant would do well to consider whether he could not make it answer to get the restriction removed, and save and sell as much straw as possible by building covered yards and Dutch barns. The sale certainly is not good in the immediate neighbourhood, but we think it might be made to answer; and, at any rate, covered yards, which are never seen in this district, would tend much to improve the quality of the manure, of which so much is made, and on which such store is justly set.

Some fields of Brownlow wheat, square-headed, white straw, look remarkably promising. This variety stands up well, produces about straw, and has a large, full, square ear; but only does well on strongish land. On the lighter soils Crisp and Golden Cluster are the favourite kinds.

Watercress cuts have been brought up from the south, and are coming much into favour; oats, with 5 cwt. nitrate of soda, frequently follow barley, and produce as much as 10 qrs. per acre. There is a fall crop of barley, but in places it is short of straw. Very little hay is made. On one farm of 800 acres only eight acres are mown, all the grass being required

for pasturing the greater number of beasts and sheep; one field has been fed and eaked for forty years. Sixty to eighty beasts are sent off this farm every year. Decorticated cotton cake and oil cake mixed are chiefly used; they are made in the district at a mill set up by the agriculturists in the neighbourhood. It sends out at the rate of 40 tons a day, and is a good example of local enterprise.

Cattle are not much bred in the district, but are bought in and finished off. There are fine flocks of sheep, especially

some remarkable Leicester, on some farms where there is little grass; it is found to answer better to buy in the sheep and feed rather than breed.

After seeing the successful farming in this district, we are more than ever convinced that judicious high farming alone can be made to answer in the long run in these days, and that even that does not pay every year is a proof, not that such farming is a mistake, but that the most profitable farming does not yield the same returns as in years past.—*The Field*.

THE DEAD MEAT TRADE.

How will it affect the English breeder? It has come, I rejoice to say, exactly to what we anticipated. There is greater encouragement than ever to cultivate, and keep pure as we can, the rare old blood we possess in our island home. The American breeder will do equally well with his Duchesses, his Red Roses, and the other strains of better class, imported from this country half a century or so ago, so long as he diligently keeps them to their kind. In one of the interesting prints which reach one across the Atlantic there has been lately a graphic description of the Texan cattle, whose lathy frames evidently want putting together by union with the compact and mellow sorts that thought and care and perseverance, not unaided by gold, have gradually produced in sundry successful homesteads of the "suld countrie." The description to which I refer runs thus; it is quoted from a report made to the *British Scotsman*, by a Special Commissioner "now in Texas, sent out to investigate the (American) capacity for beef production." The Texan cattle "are none else than Spanish cattle, direct descendants of those unseemingly rough, lanky, loughorned animals, reared for so long, and in such large herds, by the Moors on the plains of Andalusia. The Spaniards who discovered Mexico, and afterwards settled in Texas, brought cattle with them; and so exclusively have the descendants of these been reared in Texas that the Texan cattle of to-day may be called full-blooded Spaniards, inheriting and displaying all the characteristics of the herds that roamed on their native plains," &c. "The characteristics of the Spanish breed, as generally recognised, may be summed up thus—long, spreading, half-back turned horns, long legs, thin lanky body, big ill-put-together bones, throwing the body high at the hocks, and low on the rumps and loins, coarse head, thin thighs, light waist, a great amount of offal, compared to the weight of beef; and various colours, yellow, red, roan, dun, and black, with very often an iron-coloured stripe along the back. They have never been regarded as good milkers, and their beef, as a rule, is inferior. I have already seen nearly twenty thousand Texan cattle, and though there certainly were a few very fair beasts among them, I could not modify any of the above terms in describing an average specimen." *Es passent*, one would like to know whether the roan were a blue or purple roan, which is so coveted by the Bates school, or yellow roan, such as was common to Waraby, Towneley, the Foggerthorpes, &c., and which was the hue of Belvedere himself. Compared, too, with this description of the Spanish-descended cattle of Texas, it is interesting to read the following account (given in "Anson's Voyage Around the World," commenced in September, 1740, and undertaken "to cut off the principal resources of the Spaniards," and prevent their having the means to "carry on a war against Great Britain"), of the cattle the crews found in the Island of Tinian (in Polynesia) described as a "very paradise," owing to its "spacious lawns" and "stately woods," and where there was plenty of good water, and an incredible number of cattle, hogs, and poultry running wild, and all of them excellent "in their kind." On the island there were but a few Indians resident, in charge

of what was kept up as a reservoir of provisions for the Spanish garrison on the adjoining Island of Guam. The cattle were "all of them milk-white except their ears, which are generally black or brown; and it was not uncommon to see some hundreds feeding together in a large meadow." "The cattle of Tinian were computed to amount to at least ten thousand." "Their flesh was extremely well-tasted, and was thought to be more easily digested than any they had yet met with." The ships, be it observed, had come across to this Island direct from the coast of Mexico, where they had probably partaken of something resembling the Texan beef. As regards the vegetation in the two districts, was it difficult to account for this? From Mr. Thornton we know that "near the River Mohawk there is very fine pasture land," and that "good hay is stored hardly so full of herbage as in England." Then in the "Province of Quebec white clover and Timothy-grass grow luxuriantly." On the other hand, in that terrestrial paradise which Anson's crew found at Tinian, "the lawns, of a considerable breadth, were covered with a clean and uniform turf, composed of a very fine fescue intermixed with a variety of flowers." Between these districts, so widely apart, is the Texan pasturage less favourable to the growth of sweet meat? If so, their herds will require all the oftener an infusion of a fattening tribe.

On both sides of the Atlantic we find an impression prevailing that the beef, to meet "the large and rapidly-increasing dead-meat trade, must come from the Western States and territories;" and it is predicted in New York that, within a few years, the "vast grazing pastures of the West and South-west will furnish meat for the masses in Europe who are now unable to purchase it." We sincerely hope they will. It is right for our labourers and cottagers to have fresh meat oftener than they do; and this will be the case, with, not only no loss, but an actually increased profit to their employer, the tenant-farmer, if this trade continue, and due pains be taken to improve our home-herds, to which the Americans will come for fresh sires continually, because, above all things, it is certain that only good, well-fitted stock will pay for transportation; and if the above description of the Texan cattle, as they exist now, be correct, there will be a strong call for our best blood for some time to come. It is stated that there has never been a time in the history of Iowa when there was so large a demand for good young Shorthorn bulls as the present season.

In these Western States the cattle exhibit far too great a proportion of bone and inferior meat. As an American puts it, "We have the ability to furnish in quantity all that a demand can be found for," and "if a profitable market seems certain, we can work up the quality of our cattle until we can supply in quantity meat equal to any." Our object then to-day is to urge upon the tenant-farmer the wisdom of picking up females of *status*, of good old blood: never mind what particular strain, only look that it is pure for many generations back. Young bulls of the most approved so is you can buy in numbers now, not only at the Birmingham an'ev,

but on the breeder's premises. But remember your future success will depend upon the material you supply. The first-cross animal is usually superb, but he does not do to go on with. The ordinary farmer won't believe this. When he has a good bull-calf born he uses him in turn, and with that step drifts back. To make a sire of value both parents must be as *thoroughbred as possible*. How often, Cassandra-like, have we not preached this doctrine? Nine out of ten turn a deaf ear, and consequently stick almost where they are; the tenth, after a few years' perseverance in the use of thoroughbred bulls, finds himself in possession of a herd exhibiting the best points possible, and not only breeding true themselves, but producing bull-calves whose stock again satisfies the buyer, so causing him to call again when he requires a youngster. I see lately commendation of the Colomella

tribe, which was full of Cotes's pet blood, and yet a whole herd of which was recently dispersed at an absurd average, just merely the market value. What blooms that old stock will throw up in skilful hands! Study well the earlier volumes of the "Herd Book," and every catalogue you have sent you. There are *plenty of tribes* to be picked up yet comparatively cheap, and which yet hold the best old blood of the Colling's in their veins. I have known a breeder quite spoil a splendid start by stupidly exporting *first-cross bulls*, whose offspring three back with a vengeance. "Who was your granddam?" you may ask the mare that cries "Hold, enough!" in the third ploughed field; and the like holds good in cattle. Renick raised his superb herd from a single pure-blood cow. Can you not do the same?

NOTES ON ROMAN AGRICULTURE.

By CREON.

The ancient Romans were probably more devoted to agriculture than any other nation before or since. Some of their greatest military commanders were called from the plough-tail, Cincinnatus, for example; the senators principally lived in the country and cultivated the land with their own hands, and many of the noblest families, derived their surnames from cultivating various kinds of grain, as the *Fabii*, *Lentuli*, and *Cicerones*. Moreover, as a further proof of the importance of agriculture in the eyes of the nation is the fact that whoever neglected his ground, or cultivated it improperly, was liable to the animadversions of the Censors.

The division of land in the early days of the Roman Empire seems to have been made so that no citizen was allowed more than he could himself cultivate. Romulus allotted to each only two acres. After the expulsion of the kings, however, as many as seven acres were granted to each, and this proportion was observed when dividing the lands of conquered nations. It is on record that Regulus, Curius, and Fabricius had no more, and, according to Pliny, Cincinnatus had no more than four acres assigned to him.

The persons whom proprietors employed to take charge of the grounds in their own hands were usually from the lower stratum of the population. The cultivators of the public grounds of the Roman people were, however, drawn from the natives of provinces, or were citizens of Rome itself. As riches increased, leases were allowed to cultivators in a manner corresponding to our own system, only that their leases were for terms of five years, instead of our seven. Agriculture was the genuine name for all cultivators, whether of land, trees, vines, or sheep.

The various soils were characterised, and their respective qualities were investigated, as far as possible—unfortunately, however, without the aid of modern agricultural chemistry. The general distinctions, six in number, were as follows—fat and lean, free and stiff, wet and dry, which were adapted, it was said, to produce different crops. The free soil was most proper for vines, and the stiff for corn. The qualities ascribed to the best soil were, according to Virgil and various other authors, blackish colour, glutinous when wet and easily crumbled when dry, an agreeable smell and a certain sweetness, imbibes water, retains a due quantity and discharges a superfluity, when ploughed exhales mist and flying smoke, not hurting the plough-iron with salt rust, the ploughman followed by rooks, crows, &c., and when at rest this ideal soil carried a thick grassy turf.

For the improvement of soils the Roman agriculturists used various manures, particularly dung, which they were

careful to prepare in a particular manner. Pigeons' dung, and that of various other birds was sown on the fields, and mixed with the soil by means of the sacle or weeding-hooks. In the absence of dung it was customary to mix various soils, or to sow lupines and plough them in. The Greeks used beans for the same purpose. Stubble and various shrubs or growths of underwood were used for the same end. The Romans were acquainted with *calx*, or lime, but do not seem to have used it for agricultural purposes until quite late. Pliny mentions its use in Gaul, and probably it was afterwards tried in Italy. He also mentions marl of various kinds. Drainage seemed to be also known and practised.

The agricultural instruments in use were numerous, and of simple form for the most part. The form of plough, however, has not yet been quite determined. Its chief parts, however, were: *temo*, the beam to which the yoke was fastened; *stiva*, the plough-tail, on which was a cross-bar, which the ploughman took hold of, and by it directed the plough; *buris*, a crooked piece of wood which went between the beam and the plough-share—to it was fitted the *dentale*, the share-beam, a piece of timber on which the share was fixed. To the *buris* were also fixed two *arces*, supposed to have served in place of what we call earth-boards, by which the furrow is enlarged and the earth thrown back; the *coultor*, or culter, much the same as our own; and the *ralla*, the plough-staff used for cleaning the plough-share, complete the catalogue. Of course other more simple ploughs were in use, but I have described the most important of these instruments.

The Romans always ploughed with oxen, usually with a single pair, often more, sometimes with three in a yoke. These animals, when young, were trained with great care for the purpose. They were yoked by the neck usually, but sometimes by the horns. The length of a common furrow without turning was 120 feet. The oxen were allowed to rest a little at each turning, and not at any other time. These people seemed never to plough in ridges unless they sowed at the same time. They did not go round when they came to the end of a field, as modern ploughmen do, but returned in the same track. They were very particular as to the regularity of each furrow, and an opprobrious epithet was derived from an expression used to signify a ploughman who went wrong or crookedly. The furrows were commonly made so narrow, especially on much ploughed land, as to render it impossible to distinguish where the plough had actually gone, the plough when held upright hardly turning the earth aside, and only stirring it.

In cultivating the ground the Romans alternately

planted and left it fallow. The idea was that the earth became exhausted of nutritive power by carrying a crop, and needed a year's recuperation to enable it to regain its productive powers. They also very frequently ploughed the land, some stiff soils being turned over in this way as many as nine times ere a seed was sown. Fallow ground was ploughed in spring and autumn; dry rich land in winter; wet and stiff land generally in summer. The depth of the furrow in the first ploughing was usually nine inches. The seed was sown from a basket, and the hand always moved with the step, that the seed might fall equally. The principal seed times, especially for barley and wheat, were from the autumnal equinox to the winter solstice, and as soon in the spring as the weather permitted.

The grain principally cultivated was wheat of various kinds and having different cognominations—*triticum*, *siliago robustus*, and *Far*. Barley also, as I have indicated, was very much cultivated, chiefly as food for horses. Oats, flax, and various species of *legumina* or pulse, such as vetches, peas, beans, lupines, &c., were also grown for nearly the same kind of usage as at this day. Haymaking was carried on also nearly the same as with us, and placed in stacks *under cover*, the art of thatching being evidently unknown. The same methods of harvesting and thrashing corn obtained amongst the Greeks and

Jews as with the Romans (vide Is. 28, 27, and Homers, Iliad 20, 497).

Whilst individuals were restricted to a certain portion of land, and the citizens themselves cultivated their land; little or no necessity for importation was found; provisions were in plenty, prices were low, and a general satisfaction amongst all classes apparently prevailed. Men also of a sturdy and respectable class were available for military defence, obviously because of their involved interests. Under the Emperors, however, the aspect of these affairs changed. Enormous estates were absorbed by the favoured few, and the cultivation of these was almost entirely left to slaves. The result was that Rome was obliged to depend on the provinces, both for supplies of provisions and men; and it is to the overgrown fortunes of these monopolists that the age of luxury and initial ruin must be ascribed.

The Roman people were ever careful as to the propagation of their trees. Virgil gives a complete stock of instructions as to this matter. The forests were raised from seed, but the fruit grafted or inoculated. Curiously enough, Virgil and Columella both aver that any scion may be grafted on any stock, as apples on a pear stock, and Cornels or Cornelian cherries on a prune or plum stock, apples on a plane tree, pears on a wild ash—hence the passage, *omnis surculus omni arbori inseri potest si non est ei, cui inseritur, cortice dissimilis*.

FARMING IN IRELAND.

At the last meeting of the Mallow Farmers' Club, Mr. James BRINK, the President, said:—The present Parliament will be prorogued in a few days, and for all the good it has done the Irish farmers it might as well have never opened. However, it is quite on a par with the three sessions which have preceded it. The Irish, from their traditions, should have a leaning to Toryism; but the modern Tory, forgetful of past favours, has made it an article of faith to crush out and trample on the rights and legitimate aspirations of the Irish people. Our representatives craved for an assimilation of the franchise between Great Britain and Ireland, and they were refused—on what grounds I do not know. They demanded an increase of pay for the National Teachers, and they received but a mere dole. They pleaded for Self-government and Denominational Education, and we know with what result. They beseeched an amnesty to the few remaining political prisoners, and they were met by insults. Mr. Butt brought in his Bill to root the Irish farmer in the soil, and we know the overwhelming majority by which it was overthrown. Subsequently Mr. Sharman Crawford brought in his Bill, which was far more moderate in its scope, but this Bill was ousted by the obstructive policy of the Government; they actually talked it out. The entire strength of the Liberal party was to be accorded to Mr. Crawford's measure, but the Government, fearing defeat, resorted to a ruse which they now condemn in such unmeasured language when availed of by a few high-mettled, uncompromising Irish members, who resent the manner in which Irish questions have lately been treated in the House. We did not expect much from the Tories, therefore we cannot say we were disappointed. We have at least this consolation, that as far as Ireland is concerned she is weeding out her Tory representatives quite rapidly. In all the South of Ireland we have none of them save such as got in by a fluke (Mr. Goulding) and whose term of office is very precarious indeed. In Dublin and Carlow the Liberal registration is being attended to, so that at the first opportunity these great strongholds of Toryism will be razed to the ground. In Antrim the farmers have two candidates ready for the field, and the men of Down are impatiently waiting for a dissolution of Parliament to send in a most companion to Mr. Crawford. All over Ulster the farmers are beginning to feel that they need something more substantial, if they wish to remain in the homes of their sires, than the occasional flaunting of yellow ribbons, and saying hard things of their neighbours, with whom they ought to

make a common cause. They cannot shut their eyes to the fact that even the Duke of Abercorn did not scruple the other day to turn a tenant out of the world for £120 compensation, although a neighbour would give him \$220 for his interest, if accepted by the Duke. In Donegal a clergyman paid a large sum for a small holding, and on it he erected a good house and offices, but because, forsooth, the judge considered the house too good for the holding, he awarded the clergyman less compensation than if he built no house at all; or in other words, a very good house on a farm deteriorates its value. Again, in the case of Mr. Delacherois, a recent ruling would seem to indicate that although tenant-right prevailed on an estate some years ago, if no sales took place recently that the good old custom lapsed. All over Ulster the Land Courts show that tenure is most precarious. The good landlord is handicapped, while the unscrupulous one is uncontrolled. This state of things cannot last—and this even the Tories must shortly learn. In the model county of East Lothian there is nothing but evictions and sequestrations. All over England abatements of rent are conceded, and several farms are in the market, for which the landlords are begging for tenants. At the different Farmers' Clubs in England the speakers complain of their inability to make ends meet. The representative farmer, Mr. Clarence S. Read, M.P., speaking some time ago, acknowledged he has been working at a loss for some years. At the Cirencester Chamber of Agriculture Mr. Buck demanded the abolition of the Game Laws, freedom of tillage, the repeal of the Law of Distress, and a reduction of rent; and at the same meeting Mr. Wrightson, Professor of Agriculture, said that he could not conscientiously recommend any young gentleman to engage in farming pursuits with any hope of profit. We have American cattle coming over regularly, with fresh beef and mutton, cheese, and butter fresh, salted, and any amount of oleo-margarine, so well adapted for adulterating butter. We have also their cheese, eggs, fruit, and even oysters, and at the present rate of things all our agricultural implements will be of American manufacture. Even in the village of Shanballymore our worthy hon. sec. has a large stock of American-made goods, including mowing and reaping machines, horse-rakes, ploughs, washing machines, butter workers, forks, shovels, wheel-barrows, pumps, nails, and all descriptions of carpenters' tools. We import all American produce free. The Americans put on a prohibitive tax on us. Is this reciprocity? Perhaps so. And as to American corn, it

has come to this, that a very extensive farmer asked me a few months since if I would advise him to plough up a field to grow oats to feed his cattle, or if I would consider it more economical for him to purchase corn grown by a farmer in the Far West of the United States. A Devonshire farmer told me the other day it would be madness to plough land at all in Ireland. Are these times for rent-raising or disturbing that security which a farmer should have for his investments? Should it not be more the duty of wise legislators to instill into the minds of the people that they have a home in their own dear land if they are sober, industrious, and law-abiding? At a time when the red dogs of war are perpetrating unheard of savagery—when changes of the most astounding nature are certain to take place in the map of Europe, or, perhaps, in Asia, too—when an ancient and powerful race are about being wiped off the face of the earth—when communism and socialism are banding together to subvert order and legitimacy—is this a time for our statesmen to be bandying Billingsgate for whole nights in Parliament with a few Irishmen who feel goaded to resistance? Or is the mighty issue now being played for at the Balkans to be decided by the conferring of a certain title, or a mock heroic speech amid a fusillade of champagne corks at a Guildhall banquet? This is a critical time for Great Britain, and she ought to close up the differences in her own household. A most important motion was introduced this session by an English Radical member, Mr. Shaw Lefevre, to enquire how far the Bright clauses of the Land Act might be extended towards establishing a farmer proprietary in Ireland, and the evidence given before the Select Committee has been most favourable, particularly that by Mr. Godley, Secretary to the Church Temporalities Commissioners. Mr. Godley spoke from experience, and went so far as to recommend the sale of properties to farmers on mortgage, to be repaid by terminable annuities extending over fifty-two years. The evidence of the Board of Works' officials was not so satisfactory. It appears the Board of Works is a Castle of Indolence. The Board did not meet for the last three years. Their minute book was principally filled up with newspaper scraps, and it appears each official frames rules for his own convenience. No wonder that the Bright clauses were a dead letter in the hands of such a body. We have frequently referred to the anomalous state of the Grand Jury Laws, but each assizes gives us fresh proof of their defectiveness. At the Roscommon Assizes the Grand Jury awarded compensation to Mrs. Young for the loss of her husband in the sum of £4,000, to be levied off four adjoining baronies. There was not a scintilla of proof that the crime was agrarian, nor that it was the result of a conspiracy; still the poor farmers were mulcted in the sum of £4,000. The O'Connor Don, as foreman, protested against the demand; still that same gentleman votes regularly against Mr. Butt's Bill, which would be the only remedy for this most unconstitutional branch of the legislature. The men of Roscommon must see that their votes are not recorded for members whose leading acts in the House are giving opposition to any measure calculated to benefit the tenant farmers. Our strength lies in the union that exists between Irish farmers, South and North, the ballot, the parity of our representatives, and the assistance which we are certain to get from deep-thinking, unprejudiced statesmen in Great Britain. The peasant proprietary scheme is now on the tapis—it is a favourite one of mine. I read a long paper on the subject to the Cork Farmers' Club, in 1869, and sketched out a scheme which, if acted on in 1870, would be the means of rooting some thousands of farmers in the country by this time. It is for us to hope that the experience of seven years has shown that a measure which, when introduced, was howled down as confiscation, may now be regarded as the solution of the land difficulty in Ireland, even by parties never remarkable for their friendship to us. But whether by establishing fixity of tenure at fair rents, or by creating a farmer proprietary, the Irish land question must be speedily settled.

CUCUMBERS EATEN BY A CAT.—In reference to this subject, another correspondent says he knows of an exactly similar experience with a dog. The dog, however, was not suspected; but he was at length caught in the act of eating the cucumbers with as much apparent relish as man.—*Gardeners' Chronicle.*

OUR FOOD SUPPLIES.

In an article on our food supply *The Daily Telegraph* says:—

The secret of the tardy development of agriculture among us, we apprehend, will be found traceable to serious defects in the land laws, by which many enterprising farmers are discouraged from investing large capital in agricultural operations, and not a few, disheartened, are consequently impelled to seek other pursuits. If capital is to be tempted into farming upon a large scale more satisfactory conditions of tenure than exist at present must be secured, and a Valuation Act must be passed which will have the effect of equalising the rating of farms in every county. In respect to the import of meat our confidence for the future is amply justified. As with the culture of wheat, the supply of live stock in this country has diminished, and is likely to diminish so long as it is necessary to subject graziers to the restrictions with which the dread of the cattle disease perpetually visits them. This diminution has been progressive since 1874. But it is now proved beyond question that abundant supplies of dead meat are obtainable from all parts of the world. Considering the deterioration to which live stock from the European continent and America are liable on the passage, it is hardly surprising that the importation of oxen and sheep should be decreasing. Yet it is a significant fact that imports of fresh meat should be notably on the increase. A conception of the vast dimensions this branch of trade is destined to acquire may be formed from the statement that whereas in 1875 we only imported 25,771 cwt. of beef "fresh or slightly salted," in the corresponding period of this year the quantity introduced amounted to 337,380 cwt. The efficiency of M. Tellier's patent for preserving meat in sound condition during a voyage of any distance and in any climate was recently demonstrated by the arrival of the *Frigorifique*, with her experimental cargo in as excellent state. The ultimate effect of this triumph of science upon British agriculture will reveal itself in due time. One thing, however, is indubitable, England is now placed within easy reach of every meat-producing country on the globe, and it is probable that sooner or later, in view of these augmented facilities for obtaining meat supplies without the risk of importing the cattle plague, the foreign live stock trade with England will cease.

SHOOTING RIGHTS.—A decision affecting the right of shooting was given recently by the Sadron Walken county bench. Charles Richardson, gamekeeper, was summoned for trespassing upon land in the occupation of Mr. Alfred Barleigh, at Little Chesterford, Essex. It was proved that Captain Elliott hired the shooting over the same land from Lord Charles Hervey, and had exercised such right for ten or a dozen years, and therefore it was urged in defence that Lord Charles Hervey had no power to grant any right of shooting in connection with the letting of the land to Mr. Barleigh. Mr. Aukland, counsel for the prosecution, however, contended that as there was no written agreement between Lord Charles Hervey and Captain Elliott, and as a right could only be granted by deed, the defendant had no right to shoot over the land, and the magistrates held this contention to be good, notwithstanding a letter produced by the defendant from Lord Charles Hervey, in which his lordship denied that Mr. Barleigh had any right of shooting, and admitting that the right had been granted by a verbal agreement to Captain Elliott.—The defendant was fined for the offence.

WHIST IN NEW ZEALAND.—Etymologists teach us that *pecunia* was derived from *pecus*, in days when patriarchs ruled and flocks and herds were the staple of wealth. The ages of the world reproduce themselves. A friend of mine was recently up country in New Zealand, on a trip round the Globe. He stopped for a night at a squatter's hut, and was asked to eat in for a rubber of whist. Taking his seat he casually asked, "What points?" Said his partner in surprise—not knowing but that he was addressing some neighbouring squatter newly established—"Why! the usual game, of course: sheep points and a bullock on the rubber."—*Whitehall Review.*

WORDS OF WARNING TO "IMPROVING FARMERS."

Southern Scotland is a rich agricultural country, finely wooded, and consequently well sheltered; the natural drainage is unequalled, while the climate is sufficiently dry for successful sheep-raising and feeding. The rents have risen within thirty years in a marvellous manner; most of the improvements, with the exception of buildings, have been done at the expense of the tenant. But with all those qualifications which have rendered its farmers and peasantry a happy and contented people, it is a remarkable fact, no mere theory, but a practical solution, which needs no demonstration, that the landlords of this favoured district are in many cases poor, rather narrow-minded men. With a few really noble exceptions they live up to, and many of them above, their incomes. Looking back upon the history of some families who boast of a long, glorious pedigree, we cannot help exclaiming, "How are the mighty fallen!"

"Lives of great men all remind us
We can make our lives sublime."

That fashionable sport, horse-racing, has brought, or is bringing, not a few into the spider-net of the Jew. Strange as it may seem, the larger majority of our upper classes cannot afford to stay at home. More than a score of lordly palaces stand empty months and months, no tenants but some servants dragging out a weary existence upon board wages, and nothing to do, while the owners leave the land of their fathers to the management of lawyers, factors, etc., and spend their life amid the festivities of the capital; or hide themselves for a few months at some Continental spa to recruit their shattered finances, and possibly frames, after wasting their means in a luxurious and gay life. Under such baneful influences, combined with an indolent class of farmers and a miserable lot of labourers, the agriculture of some of the richest sections of England has reached a low ebb. As yet Scotland has not suffered to any degree; but if "coming events cast their shadows before," it is more likely that the tenants of Scotland will deteriorate in personal worth and education, and consequently the interests of many parties will suffer.

Nothing can be more hurtful than to stop the march of improvement. Last Whit-Sunday saw one of the ablest and best farmers in the county of Berwick leave his home. It was perhaps not such a hard case as the one we quoted previously, but it has its interesting features.

Not far from a well-known old Border town is situated a small but good estate. One of the farms was occupied by a most intelligent tenant, who prided himself upon good cattle and first-class crops. The expenditure upon artificial food and manure was very large, and no expense was spared in the matter of labour. The land was clean and the fences were trim. Some nine years ago the tenant, who was watching the course of events, applied for an extension of lease, as his yearly expenditure was very large, and it was clear that he would either have to stop manuring so extensively or get some promise that he was to have his farm on reasonable terms again. The landlord at that time was indebted to his industrious tenant in more ways than one, and he accordingly gave his word that he would never think of parting with his well-trying tenant. With such an assurance the cake and manure bill waxed larger year by year, while the culture of the farm was the admiration of the surrounding neighbourhood. Last autumn negotiations were entered upon for a renewal of the lease, which expired at Whit-Sunday 1877. It would be needless to follow up all the turns and aspects of the case. The tenant, although he had lent a needy landlord money when his credit was at a low ebb, was now turned round upon, and the screw applied. It was not as if a king had arisen, who "knew not Joseph," but simply the self-same gentleman who nine years before had encouraged his tenant to go on improving his land. The old tenant offered £1,300; and being satisfied that such a sum was as much as he could wisely give, and perhaps more than the farm could afford, resolved to leave it rather than give more. After being advertised for a long time, and having the date for receiving offers more than once extended, the farm has been let at something like £1,400 per annum, with what conditions attached we are not aware.

Another farm of a lesser extent fell out of lease at the same time. The proprietor determined to sell it, as it lay far from

his other estates. The tenant of this place was also a most industrious man, but he was a blood-sucker of the most inveterate character, and at the end of the lease this farm was in a most deplorable state. In round numbers the rent was £600 a year, and it was sold at about £18,000, which, at the price land is selling round about the district would not be up to the old rent. We do not defend the course this tenant pursued. Far from it. He was as bad, even worse, in some respects, than a landlord who rates his tenant upon his improvements. In the one case the food-producing properties are seriously affected; in the other a tenant is grievously wronged.

These cases are placed here, side by side, to compare and analyse the injustice that an improving tenant has to labour under. The first-named tenant improved his farm to the extent of three or four hundred pounds per annum in comparison to the latter. We pass over the individual slight passed upon the honest farmer, because every one who knows the landlord and his tenant are sufficiently able to judge of their means, character, and personal worth without going into an explanation in the pages of this Journal.

The question founded upon these individual cases grows into a public one, and one that Parliament will need to face ere long. Most farmers wish to improve the food-producing powers of our country, but under this system of taking advantage of their position it is impossible for the land to get a fair chance. Farmers, as a rule, know how to look after their pockets, and quite right; but they are also well aware that good and liberal farming is the sure way to make most money. The poor spirit of some landlords, who grudge the success of their prosperous tenants because they themselves are worthless and indolent, is a formidable barrier in the way of improvement. Nearly every farm in Southern Scotland has to undergo this sweating system—this vile blood-sucking, before the end of a lease. It is a crying evil. We know one of the very best farmers in the Borders who at present is devising every means in his power to draw the last shilling out of his land. Like Solomon, he knows not who may come after him, and, taking time by the forelock, he will try to get as much cash out of his farm during the next four or five years as he possibly can. We protest in the most emphatic manner against this system; but where is the remedy if landlords can abuse improving tenants in the most unrighteous manner? If the best tenant that Scotland has produced this century was evicted from his farm for his political opinions—if one of the most enterprising tenants in the Borders has to bend his knee at a ducal altar because he has been induced to lay out thousands upon his rented land—what can be expected? Are these cases not enough to raise the indignation of a generous public? Are they not monuments set up in the highways to warn their brethren of broken faith and cold inhumanity?—*North British Agriculturist*.

THE efficiency of M. Tellier's patent for preserving meat in sound condition during a voyage of any distance and in any climate was recently demonstrated by the arrival of the *Frigorifique*, with her experimental cargo in an excellent state. The ultimate effect of this triumph of science upon British agriculture will reveal itself in due time. One thing, however, is indubitable, England is now placed within easy reach of every meat producing country on the globe, and it is probable that sooner or later, in view of these augmented facilities for obtaining meat supplies without the risk of importing the cattle plague, the foreign live stock trade with England, will cease.—*Daily Telegraph*.

A NEW FEEDING CAKE.—Messrs. James Gibbs and Co. have added a new department to their business in the sale of their new mixed feeding cake. They have, at great expense, erected mills at Limehouse for the manufacture of this new variety of cattle food, which has been analyzed by Dr. Voelcker, Professor Sibson, and Dr. Macadam, whose reports are very favourable. We have not yet seen a sample of this cake, which we believe has not yet been exhibited at any show, having only recently been perfected to the satisfaction of the inventors after a lengthened series of experiments.

THE FALL IN RENTS.

The following article from *The Spectator* has already been referred to in these columns; but we find it has attracted such general attention that we give it entire:—

There is a change coming over British agriculture of which we are likely to hear more than enough, for it affects the class which of all others can best make itself heard. If we may believe the grumbings which reach us from three points of the compass, from the North, from the South, and from the East—there is some doubt about the West, but the cry comes up loudest of all from the Midland shires—the luckiest of English classes, the landlords, are beginning at last to suffer so severely that their willingness to hear of a war, not to say their readiness to provoke one, is becoming a factor in the politics of the hour. They cannot find tenants for their larger farms. As leases expire, or farmers die, or old tenants move off, they find that farms are thrown on their hands, that agents look anxious or ashamed, and that lawyers mutter about the badness of the times. The pleasant days which have lasted so long during which there have always been three applicants for every vacancy on a farm, and interest has been made for "holdings" as actively as if they were "livings" or appointments, have passed away, apparently never to return, and an applicant has to be treated like a capitalist willing to lend money on a second mortgage. He wishes to see the landlord, not the agent. He is entirely dissatisfied with the estate rules. He wants his farm to be in as perfect order as a London house with a heavy premium on it, and stipulates for as much liberty of action as if he expected to be the freeholder. Even when the concessions are made—and it is astonishing what concessions can be made when the alternative for the landlord is, figuratively speaking, to cart the muck for himself—he draws back, declares that he should like a few days to consider, and finally demands a direct and very often a serious decrease of rent. In Scotland it is asserted on excellent authority that this decrease sometimes amounts in direct cash loss to twelve per cent., equivalent to an income-tax of half-a-crown in the pound, and that landlords are yielding everywhere lest worse should befall them, and lest the loss which arises on the delay in letting should be followed by further loss from injury to the land. Two years of neglect means five years' loss of farm profit. In the Midland Counties—and the richest bits of them too—the decline is estimated at ten per cent., or two shillings in the pound; and in the South it is at least as much, with the further aggravation that even on these terms, which seem to landlords revolutionary, there is no choice of tenants to be had. Only in the West, where farms are still comparatively small, and farmers undignified and ignorant, does the old quiet continue, and even there an unmistakable demand is arising for better terms in every respect but rent. There are estates where, many leases having been granted at one time, thousands of acres have been thrown up at once, and where the smaller farmers are beginning to think and say that, if they had no consciences, the position of bailiffs to a great owner forced suddenly to take over his own land—that is, in fact, forced to turn farmer without an idea of the minute thrift which alone makes farming profitable—is better "by heaps" than the position of a tenant with ever so good a lease. "Why, *he* finds the capital?" they say, at the smaller ordinaries, and think of their own money with a new sense of love and reverence, because it is going to stay in the bankers' or the lawyers' hands.

There is no doubt of the fact, or that for landlords it is a grave one, although we do not know that they deserve any very serious commiseration. They have enjoyed the pleasant things of the world for a long time, have used their power very often a little roughly, and have even now far more secure positions than any other persons engaged in necessary and customary trades. They have dealt in an article which mankind could not do without, have enjoyed a monopoly of production, and unlike brewers or manufacturers of shillings, have made their own laws. Nobody has ventured to fine them because laborers worked too long hours, or children were sent on the land too soon, and nobody has ever interfered with their management of cottages, or their neglect to supply house drainage, good water, or reasonable ventilation. Still,

a ten-per-cent. fall in the incomes of the most secure and powerful class in the country means an immense reduction in the aggregate purchasing fund, even if the purchases are mostly luxuries, and may involve important political consequences, if only because all county members are feeling a new anxiety; and it is worth while to inquire into the reasons of the decline. The popular explanation does not seem to meet all the facts. Many of the landlords, all the farmers, and, we perceive, most of those who write upon the subject, say that the change is due to a perceptible decrease in the average profit of farming. Farmers cannot get the old eight per cent., or whatever the interest was which they were willing to concede in confidence that they usually made. The price of wheat is now so entirely regulated by the foreign supply that it is doubtful even if a war, unless it were a war with America, would greatly increase the averages; and even in that case the new importations from India would probably in a few months make up all the deficit. The price of meat is threatened by the new trade in dead meat from America, till Protectionist devices against the cattle plague are almost worthless, and the grand ultimate threat, to "lay the land down to grass," has become almost a meaningless menace. At the same time, the cost of production is going up. Manure, the farmer's most costly necessity, has increased in price all round some forty per cent. Horse-draw, his most necessary machinery, has become dearer, both to buy and to keep, by at least one-quarter, perhaps as regards keep by one-third. And human labour, upon which his outlay is cash is largest—the usual cost of labour per annum about equalling the rent—has risen all round in cash, or in exchange of cheap perquisites for cash, by three shillings on twelve—that is, by five-and-twenty per cent. Profit is, therefore, it is alleged, unobtainable, and the farmer sees no direction in which compensation can be obtained except a reduction of rent, upon which, therefore, he insists, with a dry persistence not decreased by a consciousness that for once he has got the logical as well as the actual upper hand of the owner of the soil.

There can be no doubt that the farmers' complaint is in some measure true, but there are other causes—or at least, one other cause—at work to which we desire to call attention. As we are informed, the trouble is felt principally with regard to farms above 250 acres. The smaller farmer is not half so worried as his larger neighbour. He has more to pay for labour, for horses, and for manure; but the increase is upon a more limited surface of expenditure, while he feels directly and keenly certain new advantages—the high price of his hay, the excessive demand for milk, and the great profit obtainable if he devotes a few acres to that rough market-gardening, in which the master's eye does so much, and of which, for some incomprehensible reason, the larger farmer is half or wholly ashamed. [We do not know if the feeling is local, but we can testify to one district where a large growth of profitable vegetables is considered an undignified proceeding in a farmer, justifying severe sneers at the ordinary, and even in the market place of the plainest and the hardest kind.] It is the larger farmer who is retiring, not the smaller, and it is not quite certain that his only motive is a fear of want of profit. Another, and perhaps a stronger one, is distaste for an occupation which, though in some respects pleasant, involves a great loss of independence, which is more affected by the caprice of the capitalist who lets the "plant" than any other, and which, while demanding every year larger means, every year affords less and less of those happy chances offered by almost every other kind of occupation. It takes a man with £7,500 now-a-days to farm five hundred acres with anything like certainty of reasonable profit, and a man with £7,500 now-a-days is comparatively educated, knows quite well where New Zealand is, and what Michigan or Oregon is like, sees what can be done in trade, and even in the professions—though the comparative profitableness of these latter is declining day by day—and is entirely unwilling to ask as a favour to be allowed to enter on an occupation in which chances scarcely exist, good social position is unattainable, security for his money is not yet conceded, and the individual who is most important to him regards him as his inferior. The large farmer thinks he

could do better with his money, dismises his children from his own pursuit, and, unless tied to the soil by age, habits, or temperament, retires from an occupation which has ceased to be in consonance with his new intellectual position. He might still be tempted by a farm which he could hold "as if he were owner," with no conditions but rental, but he will no longer remain in a trade in which the dealer, in every action of his life, implies to his customer that he has done him a favour in selling his goods, demanding in return both deference and gratitude. "The man was rude," says the dealer in shirtings, "but he was a good customer." "The man was rude," says the dealer in farms, "though he was actually one of my own tenants!" The class willing to take large farms decreases, therefore, rapidly, and there is little chance that, except through a distinct change of system, affecting all social relations, it will ever revive again, and the immediate consequences of the change is disastrous to the landlord. We say the immediate consequences, because we imagine that the end which some anticipate is still very far off, and that the landlords will, for the most part, yield only for a moment. The possession of power is too dear to the wealthy to be readily given up, and we expect to see a recurrence to small farms, with all their drawbacks and annoyances, before the landlords join the Liberals in finally making land an ordinary marketable commodity. There are still men to take a hundred and fifty acres, pay rent, and touch their hats for the privilege of paying it; and though the erection of new farm buildings is a pinch, and the retrogression in the style of farming is a pain, the landlords will meet the pinch and bear the pain before they surrender power. We do not expect to see rents permanently lowered, for lowering them in a moderate degree will not meet the whole case, nor do we expect to see landlords farming their own estates, for they want their lives for other ends than managing details of agriculture; but we do expect to see a rapid, perhaps a violent, return to little holdings, in the hands of men but little above the labourers, to whom they are of necessity the harshest of employers, and through whom they also, as time goes on, will some day be defeated.

"A West Norfolk Farmer" writes to *The Lyns Advertiser* :—

I have read in your paper of the 11th inst. the article from *The Spectator* on this subject, with the writer of which I entirely agree.

Although one of the class, I cannot but admit that the present extravagant rate at which farms in this county—especially those composed of light land—are let, is due, in a great measure, to the tenant farmers themselves, in bidding against each other for such occupations; but the last three years have, I think, opened our eyes, and put a complete stop on the insane competition which has been the rule for too long a period. It is high time that landowners, who have had the benefit of this, and several of whom have, moreover, endeavoured to encourage the notion that rents must advance to a still higher pitch, should try their hands at a business which they profess to believe to be so very lucrative. The Earl of Leicester (one of the largest landowners in the county, and a thoroughly practical man of business) told his tenants at his audit in (I believe) 1874, that his capital employed in farming paid him 17 per cent.—a statement which, finding its way into *The Times* and other papers, obtained a world-wide publicity, and which, emanating from such an authority, could not fail to create the impression that farming is an extremely profitable business. In fact, most outsiders would infer from it that 17 per cent. represents about an average return for a farmer's time and capital. We have not heard the result of his lordship's farming operations for the last three years, nor has any public allusion been made to his balance sheet since the occasion to which I refer; but seeing from his statement how advantageously he can carry on the farms which he has in hand, I shall not be deemed uncharitable in saying that I wish he had been farming 10,000 acres during that period.

About the time that this balance sheet was the subject of discussion amongst farmers, some influential person interested in land (with whose name I cannot at the moment charge my memory, but I am inclined to think it was the noble Earl in question) stated in public that farmers might expect to pay higher rents, seeing that landed proprietors and gentlemen of fortune would be placing their sons in a business so lucrative and satisfactory, and that, with this additional competition for farms, they would assuredly command enhanced rates.

I am not aware that any juvenile land owners or young gentlemen of fortune have been placed in farms in this county, whatever may have been the case elsewhere; but I know of some of the *parents* going into business, merely because they can no longer find simpletons with capital to hire their farms at the extravagant rents which have been too long the rule, or to be eaten up alive with game, with both of which drawbacks many tenants have had, and still have, to contend. One would suppose that if landlords really believe farming to be, so good a thing as they wish to represent it, it would answer their purpose to raise money at 3½ to 4 per cent. and invest it in a business which holds out such a glorious return as 17 per cent., or even half that rate, for the capital so employed.

I occupy a light land farm of somewhat under 1,000 acres, and I have not only been working three years for nothing, so far as regards my own time, but my capital, which has yielded me no interest whatever in the interval, is less by upwards of £2,000 than it was three years ago; and, however good the crop of the present year may be, it cannot possibly recoup my losses of the last three years, so that by the time it is realised I shall have had a four years' innings for nothing, with still a balance to the bad. Few men in any other business can, I hope, say as much. This is not an exceptional case, but I believe that nine-tenths of the light land farmers in Norfolk are in the same boat. To enable a man to take a farm of 1,000 acres, with live and dead stock, &c., at the present prices, he should have at his command at least £13,000 to £14,000; and, in view of the experience of the last three years of the prospects as regards foreign competition, both in corn and wool, and the unsatisfactory state of the labour market at home, which the new educational movement will render still more unfavourable to the employer, without in any way benefitting the labourer, no sane man with that amount of capital, or anything approaching it, will be found to embark it in such a business, unless he can hire an occupation *entirely* to his mind and on his own terms. If I were out of the business nothing should induce me to re-embark in it, but I am too old to transplant, and am adapted for nothing else.

Eight per cent. (*not seventeen*) can hardly be considered an extravagant return for capital employed in a business to which a man devotes his whole time and attention; and I very much question whether one occupier of a light land farm in this county out of every fifty, who keeps correct and reliable accounts, can show an annual return of eight per cent., taking an average of the last twenty years.

If any such there be, they are more fortunate than I.

UNITED STATES DAIRIES.—The report of the Chief of the Bureau of Statistics, Washington, for the last half of the year 1876 shows a rapid progress in the amount of dairy produce exported from the United States. The quantities and value exported during the seven years ended December 31st, 1876, are stated as follows:—In 1870, butter, 2,079,761 lb., 570,433 dols.; cheese, 60,115,090 lb., 8,646,491 dols. In 1871, butter, 8,568,012 lb., 1,606,339 dols.; cheese, 69,907,167 lb., 8,037,754 dols. In 1872, butter, 5,044,327 lb., 1,041,032 dols.; cheese, 65,459,463 lb., 8,461,114 dols. In 1873, butter, 4,074,657 lb., 947,986 dols.; cheese, 91,358,077 lb., 11,911,641 dols. In 1874, butter, 5,832,806 lb., 1,467,066 dols.; cheese, 95,807,395 lb., 13,071,946 dols. In 1875, butter, 5,292,571 lb., 1,249,244 dols.; cheese, 98,576,687 lb., 12,757,836 dols. In 1876, butter, 13,827,313 lb., 3,953,722 dols.; cheese, 100,179,396 lb., 11,817,006 dols. The statistics of the export trade with South America are as follows:—United States of Columbia—butter, 206,202 lb., valued at 63,075 dols.; cheese, 43,914 lb., 6,244 dols. Venezuela—butter, 133,006 lb., 35,218 dols.; cheese, 16,111 lb., 2,390 dols. Brazil—butter, 7,713 lb., 1,617 dols.; cheese, 1,987 lb., 267 dols. Argentine Republic—butter, 527 lb., 190 dols. Chili and Peru—butter, 8,040 lb., 2,470 dols. Uruguay—butter, 106 lb., 95 dols.

NO MISTAKE, THIS TIME.—**LODGER.**—"Dear me, Mrs. Cribbles, your Cat's been at this Mutton again!" **LANDLADY.** "On no mum, it can't be the cat. My 'Usband says he b'lieves it's the Collerlards Beetle!"—*Punch*.

TRADE MARKS IN SOUTH AFRICA.—A Bill to provide for the registration of trade marks under a permissive system has been recently introduced by the Attorney-General, and read a second time in the Cape Parliament.—*Trade Marks*.

THE MARQUIS OF HUNTLY ON THE LABOUR QUESTION AND FARMING.

In the course of a speech at the recent agricultural meeting at Tarland, the Marquis of Huntly said the labour question was a problem only to be solved by improving the dwellings of the labourers in the rural districts. You cannot prevent any able-bodied man from going into the towns and getting employment at higher wages, and you can only induce a part of the family to remain as labourers on the soil by giving them good houses and gardens. You would thereby contribute towards creating a love for the soil, and induce them to stop on it. I do not think that any other way is to be found out by which the labourers can be kept. But still, with all that, as the prices rise in the towns so will the prices rise in the rural districts. I look forward to days when there will be a much greater rise than there has been in the agricultural market. But, as I have already said, the only way you can keep the labourers is by giving them better houses. I wish to see more of a movement to do away with the bothy system in this district and in Scotland. I believe Lord Aberdeen has built a great many cottages for labourers on his estate. I am certain that all through the north of Scotland it would be a good thing if the bothy system were done away with. There is another way, which is not sufficiently followed up in Aberdeenshire, by which you would be able to meet expensive farming, and that is feeding the sheep upon the grass with cake. Colonel Innes suggested that if you did away with the half of the turnip crop you would be able to keep more sheep on your ground, but you could not do that unless you feed them with cake upon the grass. In Forfarshire, where I spent a few days lately, it is almost the universal plan. The people work their farms upon the sixth shift, keeping them three years in grass, and manuring them the third year by giving the sheep cake upon the grass. They improve to an extraordinary extent the value of the land. I have seen many instances of this in the south, and I would recommend any farmer here to try it on a small scale, and he will not regret it. I have tried it myself, and have seen the most marvellous effects. You can keep more sheep, and the expenditure in cake will be returned to you a hundredfold. I saw that Colonel Innes went in for pressing the advisability of a knowledge of agricultural chemistry. You are all aware that has been one of the things I have been urging for many years. I think every farmer ought to have a knowledge of the chemical properties of land. I am pleased to tell you that when the classes started at Aberdeen last year a young lad, son of a tenant of mine, went in on my recommendation, and has had the honour of taking two first prizes. I believe the whole of Deeside only sent in three or four students to Mr. Jamieson's lectures, and when we send such a limited number, and one able to distinguish himself, why should you not send others? If any of you have young lads that you could send in every Saturday to attend these classes, it would be a great benefit to them.

The noble Marquis having referred to a recent speech made by Col. Innes, of Learney, on Agriculture, the gallant Colonel in the course of a reply says:—I will venture so far as to say that the cost of labour in Aberdeenshire is a great obstacle to continuing successfully our present system of turnip husbandry, and that this difficulty is not met by your Lordship's suggestion, that the labouring class should be increased by providing more and better house accommodation for them, for the simple reason that the supply of more and better labourers' houses involves more expenses instead of less. I agree entirely with you in the propriety and advantage of maintaining and increasing and bettering the house accommodation of the working classes, but so long as that cannot be expected to reduce the cost of labour, it is a question apart from our present discussion, and it is best to take one thing at a time.

Assuming, then, that the money cost of labour in Aberdeenshire is high, and cannot be expected to be materially reduced, this difficulty must necessarily be carefully considered with reference to the turnip crop, which is the crop which involves in its cultivation, by the application of farmyard manure, and in its consumption by house-fed cattle, the main branch of outlay in Aberdeenshire husbandry. And having thus, I trust, secured a platform on which we can stand, I am gratified to observe that, in the further progress of the discussion I can

concur, to a great extent, in the views expressed by your Lordship.

You do indeed controvert my suggestion that, except on lands well suited for it, it may be desirable to limit the turnip crop, but practically you support my suggestion by proposing what would be a substitute for the turnip crop, namely, cake feeding of sheep upon the pastures.

The saving of labour, however, which I propose for discussion with reference to the turnip crop, is not merely the reduction of that crop on heavy lands unsuited for it, but also the saving of cost in its consumption by feeding it off on light land by sheep, instead of carting it home to be consumed in byres by cattle, and carting it back to the fields in the shape of farmyard manure. This includes also the saving of outlay in farm buildings.

The discussion of such an important topic cannot fail to be of use, and I trust it will not be allowed to die out until we see our way to economise labour and manures by employing labour to better purpose, and applying manures and feeding stuffs with more discrimination; and that then, if the cost of farming cannot be met by diminished outlay, it may at all events be compensated for by increased production.

I shall be happy to discuss the question of the supply of labour on some future occasion. I will merely observe just now that the first step is to make labour profitable. If labour is expended in agricultural work which does not yield a profitable return, the farmer grudges the wages, the labourer cannot pay house rent, and the landlord will not build houses at an outlay which yields no return. If farmers find that they can employ labour to advantage, and pay good and constant wages, the labourers will find that they can pay the rent of good houses, and the supply of houses will in due course increase.

THE MANHATTAN ABATTOIR.

The Manhattan Abattoir, originally built for a market, is an immense brick structure of the Composite order, surmounted by various domes and steeples. The market occupies a whole block, some 300 by 800 feet, and is situated between Eleventh and Twelfth Avenues and Thirty-fourth and Thirty-fifth Streets. The superficial area is four acres. About one-half of the market is occupied by the abattoir. The roof is supported by pillars, and the ventilation is absolutely perfect. The abattoir is divided up into various stalls and killing-pens. Fronting on the river there is an ample space where cattle can be landed, and allowed to find repose prior to slaughtering. From these cattle enclosures there runs a tunnel under Twelfth Avenue, where the animals can be brought at once into the shambles. This is an admirable arrangement, from the fact that the animals are not seen by the outside public from the time of their landing until they are converted into beef. That harrying of cattle, that chasing and driving them about, is entirely avoided in the Manhattan Abattoir.

The absolute method applied to slaughtering cattle is as follows:—When the cattle are all in the pens, one of the slaughterer's assistants quietly approaches an animal and passes a rope around the steer's hind leg above the joint, and by means of a winchless the beast is carefully and deliberately drawn up until it hangs suspended, head downward, some three feet from the floor. If the animal struggles at first all violent motion soon ceases, and the brute appears as if dazed. The slaughterer whets his knife—an exceedingly short one, not over six inches long—and with two rapid strokes almost covers the head of the animal from the body. It takes hardly a second, such is the certainty with which the cuts are given. Instantly large tin pans are placed under the bleeding animal. The expression in regard to torrents of blood flowing from an animal is an exaggeration—five gallons is about the quantity. The struggles of the animal are but few. To the first violent quiverings follow what are called the automatic movements. After the first second of pain evidently all physical anguish has passed away, and, if it might be so expressed, the animal is dead before he is conscious of it. A test used by the killer to satisfy himself that the animal is dead is to crook his tail. No sooner has the last quiver passed than flaying and disembowelling take place. Two or three men are busy with the carcass, and in an incredibly short space of time the beef is halved and the sides are pushed along a railroad overhead to cool. A skilful killer, with his assistants, when cattle are

doile, can slaughter and dress six animals in an hour. When urged to its utmost capacity the Manhattan Abattoir can kill and dress in a day 1,000 cattle.

The use of chill-rooms, in order to prepare cattle in the warm weather for the home market or for exportation, is most important to get rid of the animal heat in beef. Such ice-rooms or chill-rooms are now being built in all abattoirs. The construction of a chill-room is quite simple. In all modern methods of refrigerating food ice is kept apart from the alimentary substances. An ice-chamber is erected either in the chill-room or adjacent to it, and by means of a fan or blower a current of air is made to pass through the ice-chamber, thence into the room, the same cold dry air being always in circulation. Of late years the temperature at which meat could be kept has been well determined. Not lower than 33 degrees or above 39 degrees is about what is wanted. An even temperature is most desirable. At lower temperatures meat will keep for ever, but at a loss of flavour. Certain physical changes rather than chemical ones take place in the fibre of meat when exposed to low temperatures, which deprive it of its peculiar excellence.

Everything about an animal being good for some purpose, and having a mercantile value, the rendering house in the abattoir is of interest. Here the blood, the offal, all the scrapings, the minutest fragment of waste flesh, are placed, and the tallow and fat are eliminated. A visit to the rendering house of the Manhattan Abattoir would convince the most delicate as to their olfactory senses that rendering can be carried on on a most extensive scale without the least perceptible odour. In fact, it may be roundly asserted that when a rendering factory becomes offensive it is due to sheer carelessness. As a thorough process always gives the best results, it may be stated that the tallow products of the Manhattan Abattoir command a high price in the market.

The shipment of American Beef to England and Scotland has assumed such enormous proportions of late as to have directed considerable attention to it. During the months of March, April, and May of this year the weekly shipments abroad have been over 3,500 cattle from New York alone, not counting dressed cattle sent from some other ports. After the sides of beef have been properly chilled they are covered with canvas, and so suspended from hooks in the chill-rooms of the steamer. In winter the transportation of the meat from the chill-rooms of the abattoir to the vessel can be carried on at any time, but in summer night is the season for hauling the beef to the steamer. It is an interesting sight to witness the arrival of such a caravan of butchers' meat, some twenty trucks crowding the piers at a time. As celerity is everything, all the movements in putting the beef on board are as rapid as possible. The lowering of the temperature by a degree or more means a waste of ice. On the steamers the chill-rooms are constructed precisely like those in the abattoirs. The fan is driven by the machinery of the ship.

The Manhattan Abattoir, which we have selected as the type of a slaughterhouse, is to be considered as a model establishment of its kind. With those practical and economic considerations which its originator, Professor Henry Draper, has brought to bear on the management of this abattoir, he has added a certain humanitarianism in regard to the treatment of cattle. If an hour spent at the Manhattan Abattoir may not call forth precisely the same emotions as one feels in visiting a picture gallery, as a carnivorous creature, it must be a satisfaction to know that the poor beasts are kindly dealt with. A positive assertion of this kind has more than its sentimental side, for badly-killed meat, when animals have been abused or tortured, gives for result tough, flavourless, and unwholesome beef.—Abridged from *The Meat and Provision Trades' Review*.

LOCAL TAXATION.—By an Act passed on the day of the Prorogation, the returns as to local taxation are to be made by the local authorities, for the year ending the 25th of March or such other day as the Local Government board may prescribe. Such returns are to be forwarded to the Local Government Board and not to the Secretary of State, and within one month after the audit of the receipts and expenditure. It is declared to be the duty of the clerk of the "local authority" to send the returns, and where there is no such clerk, then the treasurer or other officer, under a penalty of £30. The first return under this Act is to be made for the financial year 1878, and the Local Government Board to act accordingly.—*Times*.

HOW TO PROVIDE GAME EGGS WITHOUT BUYING OR STEALING.

Mr. Thomas Charles Cade, of Spondon, Derby, writes as follows to *The Field*:

SIR,—Pheasant rearing and pheasant egg stealing have assumed such gigantic proportions of late years, that anything which will facilitate the former and diminish the latter appears to me to be of great importance.

For more than fifty years I have been in the habit of rearing pheasants on a small scale, and last year determined to make some accurate observations on the subject. In order to do so, I reared a brood of pheasants in close confinement. From this brood I selected two hens and a cock, and bestowed great attention on their rearing, so as to make them as fine birds as possible. The result has been to me most satisfactory. One of the hens commenced laying on the 15th of April, and has continued steadily until the present date, during which period she has laid seventy-nine eggs, and still shows no signs of stopping. The other has laid only seventeen eggs, and these at irregular intervals; but it is evident that she is suffering from some disease of the reproductive organs, as her eggs have been invariably deformed. It is impossible that the eggs of the one could have been mistaken for those of the other, as, besides the deformity, the colour of the eggs was different—in the one case green, in the other a rich brown. These eggs have produced the following results:—From the first sitting of fifteen eggs there were no chickens, as the hen was accidentally shut off from her nest; but from five sittings, of sixty-eight eggs, fifty-two chickens have been produced, the last sitting of fourteen producing eleven birds, showing that the fertility of the eggs has not diminished towards the end of the season. Eight of the remaining sixteen eggs were broken in the nest, five birds died in the shell, and only three eggs were unfertile, one of these being double-yolked. It should be remembered that all the green, deformed eggs were included among the above-mentioned sittings, and I have no doubt that, from the thinness of their shells, they formed a large proportion of those that were broken. The size of the eggs was extraordinary; when weighed against wild ones they easily overbalanced them, and the size of the chickens was such that, as the gamekeepers expressed it, "they were a week old when they were hatched."

This large production of eggs I attribute to three causes—the age at which the birds were placed in confinement, and the method in which they were housed and fed.

First, these birds were in confinement from the day that they were hatched, and never knew more liberty than a range of five yards by four would afford them. I have no doubt that the plan usually adopted by gamekeepers of taking their birds up in February, just before the breeding season—is the one of all others calculated to destroy their fertility. The birds are shy and wild, they pine for their liberty, and refuse to eat as they ought, and in consequence the number of eggs they lay is small, and the quality indifferent. My birds, on the contrary, are comparatively tame, and though kept in a garden where they are constantly disturbed by passers by, have not, as I think the results show, been affected by their exposed position.

Secondly, as to their housing, my arrangements have been simple and inexpensive. They are confined in an inclosure four yards by five in area, and 2ft. high, easily constructed with eight boards—a place that any skilled labourer could knock together in an hour—and covered with a strong neck dipped in a preparation of oil and soap. Two wooden coops, each about a cubic yard in dimensions, with a perch, are placed at one end; a crooked branch for an outside perch, and a fir bough, behind which the hens may lay, complete the whole arrangements.

The inclosure is placed upon light gravelly soil, not turf; and this I regard as most important, as thus the excrement is always deposited in the earth and rendered innocuous; so that, although the place has never been moved, and only once in the course of the year dug over (not because it was necessary, but because opportunity offered), the ground is now as sweet as it was on the first day the birds were put in.

Thirdly, as to feeding, my birds have had all the ordinary varieties of grain, and in addition buckwheat, plenty of red mangol, and—what I regard as the great secret of my success—a constant supply of boiled sheep pluckies, at the rate

of one for every four pheasants per week. The paunches, which cost about a penny apiece, should be well cleaned, thoroughly boiled, and cut in o strips about 2in. long. Something of this description is an absolute necessity, to supply the want of insect food, and is devoured with the greatest eagerness by both old and young birds.

I have said nothing about the rearing of the young birds, but I feel confident, from my own long experience, that out of a hundred chickens fairly hatched, the offspring of birds kept as I have described, ninety-five in an ordinary year ought to be raised, provided only that they are kept on light soil, not turf, and well supplied with animal food.

Supposing, then, that any gentleman wishes to rear 500 pheasants next year, let him take up at once from his young broods twelve hens and four cocks, and devote eighty square yards of light soil in the way that I have described, placing one cock to every three hens, and I will guarantee him at least that amount. If he wants 5,000 let him take up ten times that number.

I am not here supposing that each hen will lay him seventy-nine eggs as mine has done; but I feel sure that if the birds are properly fed and housed the average should certainly not fall below sixty.

Should any of your readers wish to put any questions to me with reference to this subject, I shall be most happy to answer them, either directly or through your columns.

I must apologise for taking up so much of your valuable space, but I feel that it is highly desirable that publicity should be given to anything which may tend to diminish the disgraceful practice of egg stealing—a trade which, as Lord Stradbroke shows in a letter to *The Times*, has reached a height that I never could have believed possible.

THE MODEL FARMS OF IRELAND. IMPORTANT FIELD EXPERIMENTS.

About twelve months ago the Commissioners of National Education sold or surrendered a number of their model farms. Six, the most prosperous and successful of these institutions, have been retained—namely, the Albert Farm, Glasnevin, under the immediate superintendence of Professor Baldwin, one at Kilkenny, one at Cork, one at Limerick, one at Athy, and one at Ballymoney. The disposal of the farm was looked upon by many as assuring the downfall of the whole system of agricultural education. This feeling became so general as to have exercised an unfavourable effect on the remaining ones. We are of opinion that these establishments could be made eminently useful. The most intelligent agriculturists in Scotland are making energetic efforts to establish a means for performing the same work as the sanguine founders of our model farms had in view. Similar institutions have been established in America, in England, Germany, France, and elsewhere.

The model farms which have been disposed of were well known to have signally failed, and their suppression (which was strongly urged by Professor Baldwin, the head of the agricultural department) did not call for the slightest indication of remonstrance on the part of the public; their failure was so marked that we have no reason to regret their disappearance. At the same time we should like, in the interest of agricultural progress, to see the cause of their failure fully explained. As already noted we do not regard their abolition as any loss to the public, but we do regret very much to find the feeling becoming prevalent that the farms which have been retained are to meet with the same fate. So anxious are we to remove this false impression from the minds of the public, that we feel very great pleasure in drawing attention to the fact that the commissioners have authorised Professor Baldwin to institute experiments on each of the remaining farms. This will make the results, even of a single year, most valuable. These experiments are conducted on the Kilkenny farm by the careful and pains taking agriculturist, Mr. Ross, and we feel certain that the results obtained under his vigilant superintendence will prove extremely useful to the neighbouring farmers, and merit the approbation of all men connected with the cultivation of the land.

The plan on which the experiments are being conducted is extremely simple. This will make the results more reliable. Two crops have been experimented on this year, namely, oats

and swedes. Land of uniform quality was selected. For the swedes the ground was marked in the same way—an equal number of drills opened in all the plots, and the same manures applied as for oats, but at a different rate per acre.

The successful importation of American meat, coupled with the spread of contagious diseases, are so seriously affecting the profits of the grazier and stock producers that it is almost certain Irish farmers will be obliged to till more than hitherto. They cannot hold their own by continuing their old-fashioned primitive models of farming. In order to make money on land nowadays, it requires the application of an amount of skill, knowledge, judgment, and business capacity which were quite unnecessary among our successful forefathers. In order to produce remunerative crops, farmers who pay a high rent must resort to the use of artificial manures to supplement the home-made manure. And there is no branch of the farmer's profession of which he is so ignorant as of the action and use of these manures.

The crops which are raised on the farm require food. Experience has taught the farmer that the different classes of farm animals require different food; so it is also with the different plants which he cultivates—but he has no such experience to aid him. He is not aware that a potash manure benefits his crop, and a phosphatic manure another crop, or that both would be sometimes required in considerable quantity by some plants. He buys this manure for turnips, and that for grain, and he is quite at the mercy of the manure vendors. We feel confident that the experiments to which we refer will be productive of great good, especially to the neighbouring farmers, who will have an opportunity of examining for themselves the growing crops, and seeing the various effects of the several artificial manures upon them.

We have lately inspected these experiments, and can say that the results on the swedes are truly interesting and instructive, and we advise the farmers of the district to go and look at them.

We cannot take leave of this subject for the present without expressing our sense of all that is due by this kingdom at large to Professor Baldwin, for all that he has done to disseminate enlightened views on the science and economy of agriculture. His books on various branches of husbandry have become standard works. With a strong devotion he has for many years laboured to forward the best material interests of Ireland and of her agricultural population; and whether we regard him as the able writer, the eloquent lecturer, or the courteous official, we believe that in either capacity he deserves well of all his fellow-countrymen. We trust that Professor Baldwin will be enabled to give the public in due time the full results of these important and interesting experiments, and that the details in connection with each class of experiment will be amply given. We know if they do appear they will be intelligently given, and valuable information will be conveyed through this medium to the agriculturists of Ireland. We would at the same time impress on the farmers of these districts where model farms are still maintained the great advantages they may obtain for their sons through these institutions.—*Kilkenny Moderator*.

WHICH IS RICHEST, MORNING'S OR EVENING'S MILK?—This subject has now been put to the test of chemical analysis, and the result is that the evening's milk is found to be the richer. Professor Boedeker analysed the milk of a healthy cow at different periods of the day. The Professor found that the solids of the evening's milk (13 per cent.) exceeded those of the morning's milk (10 per cent.); while the water contained in the fluid was diminished from 89 per cent. to 86 per cent. The fatty matter gradually increases as the day progresses. In the morning it amounts to 2½ per cent., at noon 3½ per cent., and in the evening 5½ per cent. The practical importance of this discovery is at once apparent; it develops the fact that while 16 oz. of morning's milk will yield but ½ oz. of butter, about double the quantity can be obtained from the evening's milk. The casein is also increased in the evening's milk from 2½ to 2½ per cent., but the albumen is diminished from 44-100ths per cent. to 31-100ths per cent. Sugar is least abundant at midnight (4½ per cent.) and most plenty at noon (4½ per cent.) The percentage of the salt undergoes almost no change at any time of the day.—*Canada Globe*.

HARVEST TIDE.

Of the whole year harvest time seems beyond doubt to be the most delightful portion. At other periods Nature claims our admiration for her richness and beauty; at this it is her bounty which most forcibly strikes us. It is then that her real end is reached in fruition, to which the other seasons are subordinate and preparatory. A sense of ripeness seems to pervade the very air and sky; the trees drop beneath the weight of luscious fruit; the golden corn, borne down by the heavy care of maturation, bends gracefully to the light breeze; the

"Soft and winnowing winds do cool
The gloamin' o' the year."

and the sun sheds full rays of glory upon a landscape, which everywhere meets the eye softened and mellowed by a deep rich colouring.

In speaking of the customs with which the natural feelings of rejoicing and gladness have surrounded this period of the year, it were needless to refer to their origin to the mists of antiquity, possessing, as they do, a fitness to which their preservation was, perhaps, in a greater measure due, than to that mere demand of custom which, in the case of many of our observances, was the only cause of their continuance, the object and origin having been long forgotten, or the necessity passed away. Certain it is that from the earliest period harvest festivities have been the universal rule: from the feast of ingathering which the Israelites were commanded to keep, to the Roman festival of Ceres, or later to the hearty English harvest-home. In every age, and among every people, the great staple of life, the value of corn to man, is fully testified by the fact that even far back in history it was deemed necessary to make special laws in reference to it. It has, moreover, been said by botanists to be nowhere found in its primitive state, and like fire by some, has been regarded as a revelation to man rather than a development.

One of the most glorious pages in the great book of nature is a ripe, waving cornfield; and well, indeed, it is that the colour should be golden of what is wealth in its truest, fullest sense. There is a solemn sublimity over it all which affects the most careless, and unconsciously fills the heart with a mingled sense of joy and thankfulness; it seems to have a feeling, as it were, of a duty proudly accomplished, as in the breeze the laden ears whisper the glad intelligence that the work is done, that Nature's generous gift to man is ready to be rendered up. And when in the hands of the reapers, there are no mere picturesque scenes than that afforded by the harvest-field, with its busy band of workers, whose white shirt-sleeves gleam in the sun, whilst from every side comes the hum of labour, the rustle of the grain, the peculiar rattle of the reaping-machine as it goes quickly along, leaving behind it a track of gracefully-falling corn, and ever and anon the delightful bark of the farmer's dog, which, as it plays amongst the stubble, seems to enter into the joyfulness of the occasion. Said William Howitt, "Such groups are often seen in the wheat-fields as deserve the immortality of the pencil. There is something, too, about wheat harvest which carries back the mind, and feasts it with the pleasures of antiquity. The sickle is almost the only implement which has descended from the olden time in its pristine simplicity to the present hour, neither altering its form nor becoming obsolete, amid all the fashions and improvements of the world. It is the same now as it was in those scenes of rural beauty which the scripture history, without any laboured description, often by a single stroke, presents so lovingly to the imagination, as it was when tender thoughts passed

"Through the sad heart of Bath, when sick for home,
She stood in tears amid the alien corn;"

when the minstrel-king wandered through the solitudes of Paru, or fields, reposing at the foot of Carmel; or, 'as it fell on a day, that the child of the good Shunamite went out to his father to the reapers.'" Since Howitt wrote, however, even the sickle has at length succumbed in the march of invention, and is rarely now to be met with.

In Scotland and Northumberland the festivity which accompanied or rather concluded the ingathering was called the *lirn*, evidently a corruption of the word corn. When the last

field was nearly completed it became a struggle amongst the reapers which should arrive at the end of a ridge first. The last handful cut was dressed up with ribbons and trimmings, and called a *kira* baby, or harvest doll, no doubt representing the Roman goddess Ceres, and carried home at the head of a procession of reapers singing and dancing to the music of fiddles and bagpipes. This was hung up over the harvest supper-tables and preserved in the farmer's house until the season returned another year, when it was replaced. Sometimes this last portion was left to be cut by the prettiest girl present, who was called the Harvest Queen. In other parts of the north of England this final struggle bore the name of a *well*, and the after feast a *well-supper*. Various derivations of this term have been conjectured. It doubtless comes from the French word *mole*, which we may translate as a struggle; but the Norse *mehl* (farine) has been also suggested. In the South of England it was customary for the labourers at the commencement of the harvest to choose one from amongst themselves, to whom was given the title of the "Lord of the Harvest." According to Tusser Redivivus (1744), he was "generally some staid, sober-working man, who understands all sorts of harvest work. If he be of able body he commonly leads the swarth in reaping and mowing. It is customary to give gloves to reapers, especially where the wheat is thisty." In Norfolk the reapers were wont to leave their work at any time under their "lords" and beg a "largess" of passers-by. This practice is mentioned in the "New Drollery" (1673):

"We have a custom nowhere else is known,
E'er here we reap where nothing e'er was sown;
Our harvest-men shall run ye cap and leg,
And leave their work at any time to beg."

This was also done in Hereford, Suffolk, and Essex, after the harvest supper was over, from some neighbouring eminence, when

"'Twas near upon as light as noon,
A largess on the hill
They shouted to the full round moon."

In some parts the last grain cut was called a *mare*, and sent to the nearest neighbour who had got his harvest in, a name and custom appearing to have their origin in the feelings of joy and superiority over one another, arising from the fact that it had been safely gathered before the fields had been entered and the grain trampled down by wild mares. Dr. Johnson, hater of the Scotch as he was, condescended in his *Tour to the Hebrides* to take notice of some of their customs. The strokes of the sickle, he tells us, were timed by the modulation of the harvest song, in which all their voices united. There seems to have been no meaning in this, but was simply to gain regularity and impart cheerfulness, similar to the song every resident in a seaport will have heard sailors use in heaving the anchor or hauling upon ropes.

The wagon containing the last load in many parts of rural England was called the "hock cart," and proceeded along the road in a kind of procession accompanied by the reapers playing and dancing. In Lincolnshire those on the summit of the wagon had handbells, which they rang, singing the following distich:—

The boughs do shake, the bells do ring,
So merrily comes our harvest in,
Our harvest in, our harvest in,
So merrily comes our harvest in.

In some counties much merriment was caused by ambuscades waylaying and drenching the hock cart with water.

But the great ceremonial of the harvest home was the harvest supper. After the similar festivals of the Romans when they sacrificed to Vacuna, the goddess of rest, the masters were accustomed to sit at the table with their servants, through whose labours the fruits had been gathered in. This good custom was still retained to modern times, all being on an equal level at this season of rejoicing. The *well* supper was usually held in a large barn or room where a substantial meal, with no lack of good ale wherewith to wash it down, was prepared. Then ensued a scene of the enjoyment only to be felt by those who have experienced hard toil and anxiety, when

at last their work is ended and they know that they are receiving a well-earned reward. Grahame, in his "British Georgics," thus describes the kirk supper as held in the north of England:—

The fields are swept, a tranquil silence reigns,
And pause of rural labour far and near:
Bright, now, the shortening day and blythe its close,
When to the kirk the neighbours old and young
Come dropping in to share the well-earned feast.
..... from the barn
The threshers hie to don their Sunday coats.
Simply adorned, with ribands blue and pink
Bound round their braided hair, the lasses trip
To grace the feast, which now is smoking ranged
On tables of all shape, and size, and height,
Joined awkwardly yet to the crowded guests
A seemly, joyous show, all loaded well.
When ended, the repast, and board, and bench
Vanish like thought, by many hands removed.
Up strikes the fiddle, quick upon the floor
The youths lead out the half-reluctant maids,
Bashful at first, and darting thro' the reels
With timid steps, till by the music cheered
With free and airy steps they bound along.
Sometimes two ancient couples o'er the floor
Skim through a reel, and think of youthful years;
Meanwhile the frothing bickers soon as filled
Are drained, and to the gawwates off repair,
Where goesips sit unmindful of the dance.

Singing also finds a place in this merry-making. In Norfolk the following health-drinking catch is sung by the company:—

Now supper is ended and all things are past,
Here's our mistress's good health in a full flowing glass.
She is a good mistress, she provides us good cheer.
Here's our mistress's good health, boys,—Come drink *half*
your beer.

Here's a health to our master, the lord of the feast,
God bless his endeavours and give him increase,
And send him good crops that we may meet another year.
Here's our master's good health, boys,—Come drink *off*
your beer.

Most, indeed we may say all, these customs with which harvest home was once celebrated are now but memories of a departed period. A writer, however, in the *Newcastle Chronicle*, of a few years ago, asserts having witnessed some of these in his native parish of Monk Wearmouth since 1824, "not once in a way, but as a regular and invariable thing at the end of every harvest. At this day every farmer still has his well-supper as far as I know, but it is a long time now since I saw the well-baby." Though in some remote corners this good old custom may be preserved, in the generality of cases it is superseded by the less romantic, if certainly more appropriate thanksgivings in the various churches, with, it may be, competitive games and tea-drinking in a tent.—REGINALD CORLISS, in *The Gardener's Magazine*.

POPULATION AND PUBLIC DEBT OF THE UNITED STATES.—The population of the United States in 1790 was 3,929,214; in 1870 according to the census, it was 3,855,371. The population of Illinois in 1810 was 12,283; in 1870 it amounted to 2,539,891. The population of Chicago in 1830 was only 70, and it is now (1877) estimated to be 590,000. The public debt of the United States in 1791 amounted to 75,463,476.53 dols. which was reduced to 39,108,905 in 1836, the lowest figure since the establishment of the Republic. In 1866 the debt has swelled to the enormous sum of 2,763,495,879.81 dols. but for the past eleven years a very sensible reduction has been effected, amounting nearly to seven hundred millions of dollars, the amount of the debt now being 2,092,931,941.81.—*Board of Trade*.

An error has been committed by a correspondent of the *Agence Havas*, announcing that the harvest in Hungary would be very abundant. He has mistaken the Austrian *centner* of fifty-six kilos for the French quintal of one hundred kilos; so that his estimate of a harvest of fourteen millions of quintars of wheat, five of rye, and five of barley means really little more than half of these figures. This error was reproduced by all the French papers, and in consequence a not unimportant movement took place on the markets of the Continent.—*World*.

THE MAN-EATING TREE OF MADAGASCAR.

The following description of this singular tree, found in the Island of Madagascar, is copied from *The New York World*. It was originally published in the last "Gruene and Walther's Magazine" of Carlsruhe, together with notes upon it by Dr. Omelia Fredlowaki, to whom the letter of Carl Leche, the discoverer, from which the following is extracted, was addressed:—"The Mikodoe are a very primitive race, going entirely naked, having only faint vestiges of tribal relations, and no religion beyond that of the awful reverence which they pay to the sacred tree. They dwell entirely in caves hollowed out of the limestone rocks in their hills, and are one of the smallest of races, the men seldom exceeding 56 inches in height. At the bottom of a valley (I had no barometer, but should think it not over 400 feet above the level of the sea), and near its eastern extremity, we came to a deep tarn-like lake, about a mile in diameter, the sluggish waters of which overflowed into a tortuous reedy canal that went unwillingly into the recesses of a black forest, jungle below, palm above. A path diverging from its southern side struck boldly for the heart of the forbidding and seemingly impenetrable forest. Henrick led the way along this path. I followed closely, and behind me a curious rabble of Mikodoe men, women, and children. Suddenly all the natives began to cry, 'Tepe! Tepe!' and Henrick, stopping short, said 'Look!' The sluggish, canal-like stream here wound slowly by, and in a bare spot in its bend was the most singular of trees. I have called it the Crinoda, because when its leaves are in action it bears a striking resemblance to that well-known fossil the crinoid lily-stem, or St. Cuthbert's beads. It was now at rest, however, and I will try to describe it to you. If you can imagine a pineapple eight feet high and thick in proportion resting upon its base, and denuded of leaves, you will have a good idea of the trunk of the tree, which, however, was not the colour of anana, but a dark, dingy brown, and apparently hard as iron. From the apex of this truncated cone (at least two feet in diameter) eight leaves hung sheer to the ground, like doors along back on their hinges. These leaves, which were joined at the top of the tree at regular intervals, were about eleven or twelve feet long, and shaped very much like the American agave or century plant. They were two feet through in their thickest part, and three feet wide, tapering to a sharp point that looked like a cow's horn very convex on the outer (but now under) surface, and on the inner (now upper) surface slightly concave. This concave face was thickly set with very strong thorny hooks, like those upon the head of the teasle. These leaves, hanging thus limp and lifeless, dead green in colour, had in appearance the massive strength of oak fibre. The apex of the cone was a round white, concave figure, like a smaller plate set within a larger one. This was not a flower but a receptacle, and there exuded into it a clear, treacly liquid, honey sweet, and possessed of violent intoxicating and soporific properties. From underneath the rim (so to speak) of the undermost plate a series of long, hairy green tendrils stretched in every direction towards the horizon. These were seven or eight feet long each, and tapered from four inches to a half-inch in diameter, yet they stretched out stiffly as iron rods. Above these (from between the upper and under cup) six white, almost transparent, palpi reared themselves towards the sky, twirling and twisting with a marvellous incessant motion, yet constantly reaching upward. This as roads and frail as quills apparently, they were yet five or six feet tall, and were so constantly and vigorously in motion, with such a subtle, sinuous, silent throbbing against the air, that they made me shudder in spite of myself with their suggestion of serpents flayed, yet dancing on their tails. The description I am giving you now is partly made up from a subsequent careful inspection of the plant. My observations on this occasion were suddenly interrupted by the natives, who had been shrieking around the tree in their shrill voices and chanting what Henrick told me were propitiatory litanies to the great tree deity. With still wilder shrieks and chants they surrounded one of the women, and urged her with the points of their javelins, until slowly, and with despairing face, she climbed up the stalk of the tree, and stood on the summit of the cone, the palpi twirling all about her. "Tak! Tak!" ("drink! drink!") cried the men, and stooping she drank of the viscid fluid in the cup, rising instantly again with rill

hazy in her face and convulsive cholera in her limbs. But she did not jump down as she seemed to intend to do, O, no! The atrocious cannibal! that had been so inert and dead came to sudden, savage life. The slender delicate palpi, with the fury of starved serpents, quivered a moment over her head then, as if by instinct with demoniac intelligence, fastened upon her in sudden coils, round and round her neck and arms; then while her awful screams and yet more awful laughter rose wilder, to be instantly strangled down again into a gurgling moan, the tendrils, one after another, like great green serpents, with brutal energy and infernal rapidity rose, retracted themselves, and wrapt her about in fold after fold, ever tightening, with the cruel swiftness, and savage tenacity of anacondas fastening upon their prey. It was the barbarity of the hoocon without its beauty—this strange, horrible murder. And now the great leaves rose slowly and stiffly, like the arms of a derrick, erected themselves in the air, approaching one another, and closed about the dead and hampered victim with the silent force of an hydraulic press and the ruthless purpose of a thumbcrew. A moment more, and, while I could see the bases of these great levers pressing more tightly toward each other, from their interstices there trickled down the stalk, streams of the viscid honey-like fluid, mingled horribly with the blood and oozing viscera of the victim. At sight of this the savage hordes around me, yelling madly, bounded forward, crowded to the tree, clasped it, and with cups, leaves, hands, and tongues, got each one enough of the liquor to send him mad and frantic. Then ensued a grotesque and indescribably hideous orgie, from which, even while its convulsive madness was turning rapidly into delirium and insensibility, Henrick dragged me hurriedly away into the recesses of the forest, hiding me from the dangerous brutes and the brutes from me. May I never see such a sight again! The indescribable rapidity and energy of its movements may be inferred from the fact that I saw a smaller one seize, capture, and destroy an active little lemur which, dropping by accident upon it while watching and grinning at me, in vain endeavoured to escape from the fatal coils. With Henrick's assistance and the consent of some of the head men of the Mkodoe (who, however, did not dare to stay to witness the act of sacrifice), I cut down one of the minor trees and dissected it carefully."—KARL LACHM.

YELLOW LIGHT.

Mr. Watson Smith, F.C.S., writes as follows to *The Daily News*, in comment on a letter which we copied in a recent number:—

The letter of Dr. Robert Charles Croft on the above subject, which appeared in a recent impression, shows several misconceptions with regard to the compositions and qualities of light. The facts he mentions are perfectly in order, and his experience that yellow light (light deprived of its chemically active constituents, the blue rays) is influential in abating the irritation and force of small-pox is undoubtedly valuable. But he seriously misses his way when he commences to make deductions, and to suggest precautions and remedies for sunburns and inflamed and weak eyes. It is a pity, in fact, he did not try the effect of wearing yellow glass spectacles to mitigate the glare of sunlight before writing this letter. In justice to any of your lady readers at the seaside, to whom these suggestions appear to have been thrown out, will you allow me to explain briefly the composition and qualities of sunlight, and then our fair friends can judge for themselves if yellow veils or spectacles are better than blue or green ones. Common white light is not simple or elementary, but is a mixture of all the beautiful shades of colour observed on letting it pass through a common glass prism. In white light all these coloured rays are blended together, and the effect of the prism is to unravel them and lay them side by side, as in the opening of a many-coloured fan. Removing the prism is like closing the fan; the rays, so to speak, fall together again, and white light is produced. Now, the peculiar band of coloured light produced by the prism is called the solar spectrum, and it commences with red at one end, and goes through orange, yellow, green, blue, indigo, to violet at the other end. Again, out of this spectrum flows the rays of heat, luminosity or light, and chemical activity or actinic rays. But these rays do not flow equally from all parts of the coloured strip of spectrum. From beyond the red end

of the spectrum, and gradually diminishing to the blue, flow the heat rays, the maximum of heat proceeding out of the darkness beyond the red therefore. The maximum of intensity of light is in the yellow and orange, but this falls off rapidly in the green, and still more in the blue. However, just in the blue, where the light is fading, the chemical activity commences to spring up, and goes on increasing as the depth of blue increases, till the maximum is attained in the darkness beyond the violet. Now, a body is coloured, because it absorbs all the other colours out of the white light which falls upon it, and rejects the one which appears to colour it, throwing it off in rays of coloured light. For example, a flower is blue because it absorbs from the mixture white light, which falls upon it, all the red, orange, and yellow rays, and rejects or throws out the blue. In like manner a coloured glass absorbs from white light passing through it all rays of a different colour to itself, but those it lets freely pass. Thus blue glass allows only blue rays to pass, and absorbs and keeps back yellow, orange, and red rays, and consequently with them the intense light or glare (yellow) and the heat (red). Green glass is more mild; being a mixed colour (blue and yellow), it permits more light to pass than blue glass would, but the presence in it of the blue considerably mitigates the glare. Now, yellow glass allows the most intense light rays to pass, and with them a considerable amount of heat rays also, and hence is just the worst medium that could be used to pass sunlight through in order to diminish glare, and would also be too ineffective as regards scorching by the sun. The blue rays are coolest and most free from light, and their chemical activity has no effect upon the eye, which is only constructed for the reception and utilisation of the light rays. On the other hand, when a part has been burnt or scorched, and the cuticle destroyed, an inflammation sets in, in which probably oxidation of the tissue takes place, and it is possible in such a case that the chemically active rays might have some deleterious effect in favouring this action to some extent. But the important thing is to prevent the scorching and inflammation, and for this a blue medium, and not a yellow, is best.

Dr. Croft replies thus:—

It has given me much gratification to find that the humble suggestion I made through your columns respecting "the application of yellow light as a remedial agent" has met with so much attention, both from the public and from scientific men, although the latter seem disposed to cavil because they cannot at present reconcile their theoretical knowledge of light to the practical uses I have suggested. One gentleman, under the signature of "Watson Smith, F.C.S.," is so emphatic upon the matter that I beg permission to say a few words in answer. This correspondent gives me credit for advising yellow light in small-pox, but says that I "seriously go out of my way" in making other suggestions—that it is a pity I did not try the effect of yellow spectacles (taking it for granted that I did not do so) before I wrote the letter suggesting their use and the use of yellow veils for inflamed eyes and sunburns; and he goes on not only to depreciate yellow light, but to advise your "lady readers" before adopting it to read his elaborate description of the composition of light, and to "judge for themselves" whether afterwards they will wear blue or yellow. All this is very well, but very little to the purpose. The letter is admirably written, and the description of the spectrum clever enough; indeed, I fancy it is almost too clever to interest the fair readers whom he addresses. Let me in my turn state one or two facts. I am writing this letter in the glaring sunlight, wearing spectacles over which I have placed a piece of deep yellow glass, and I am writing in the greatest comfort, whilst if I remove the yellow glass the glare is too painful to endure. Thus protected I have just been out in the garden, and can look up straight at the sun without the least inconvenience. Anyone can try this plan (yellow spectacles cannot yet be had), and if it be found that by using some yellow medium we can endure more glare and derive more comfort than we can obtain by any other means, surely it is best to try the practical experiments first and to theorise afterwards. As regards the use of blue spectacles, they relieve for a few moments, but the eyes almost always feel peculiarly uncomfortable after they have been worn for some little time. Perhaps I may be allowed to put the case before your fair readers in a less learned and more familiar manner. Light possesses three properties:—1. Illuminating power; 2. Heating power; 3. Chemical power. You can certainly separate the chemical

power from the others, or the photographer's "occupation would be gone," for light filtered through a yellow medium, although it retains its illuminating power, loses its chemical properties, and the sensitive plates are not affected. Now, what I want ascertained by experiment is this—Can the three properties of light named above be separated or combined and used in any way as agents to cure disease or to alleviate suffering? I quite believe this to be possible, but as one man can only hope to get together a very small amount of experimental knowledge, I have elected to make public what little I know in the hope that others will assist in ascertaining any facts connected therewith, and I make this public with the less hesitation seeing that it involves no question of medical treatment, but it is an experiment so simple and inexpensive that if there be no ultimate benefit gained, at least no harm will result. The letters I continue to receive relating to the temporal effects of yellow light in special cases are encouraging, and I hope the subject will not be lost sight of.

WHAT SQUIBBLES CAN DO.

The Pacific Rural Press publishes the following letter and comments:—

EDITORS PAGES:—As you have commented largely on the destruction of the squirrel, I send you the wheat taken from the pockets of a healthy squirrel on the evening of the 2nd inst., just as he was going home. Please weigh and make such comments as seem to you best for the public good.—**LORENZO TARRA, Osoy, Yolo county.**

We have weighed and counted the above. The weight was one and five-eighths ounces; the number of kernels, 1,530. This is the largest "find" of this kind which we now know of, but we shall name some below which are quite large enough to be alarming. It would be quite proper now to have an eye on these things and collect proof of the enormous loss which these pests entail upon our farmers. This proof will serve to arrest the attention of law-makers this winter, and cause them to give the subject such attention as it needs.

We have read our exchanges this week with one eye open for squirrel outrages, and have caught several. The *Pacific* says: "Capt. Allender presented us last week with a bottle containing 1,270 grains of plump wheat. This wheat was taken from the pouches of a squirrel killed July 18th, 1877, by George Allender, on the Ordish Place, one-half mile from a grain field."

The *Antioch Ledger*, of August 4th, has the following:—James Hobson, a substantial farmer, who lives at the head of Lone Tree Valley, recently dug out of one hole 101 squirrels. He says in that vicinity squirrels are thicker than ever before. Now if we multiply 101 by the figures representing the damage one squirrel can do, as illustrated in the following from the *Stockton Independent*, we shall have some idea of how offensive these pests are to farmers: "Patrick Sexton, a farmer, who leases one of Captain Moss's farms, one and a half miles east of Atlanta, in this county, yesterday brought to this office a package of wheat he had taken from the pouch of a squirrel killed by his dogs. The quantity was astonishing. There were 788 grains, weighing three-quarters of an ounce. The grains were not all plump and full sized, as in that proportion it would require 1,051 of them to make an ounce, whereas an ounce of average plump wheat contains only from 925 to 950 grains. We could scarcely have believed that a squirrel had the capacity for carrying off so much grain, but Mr. Sexton states that there were two witnesses to the removal of the grain from the cheeks of the dead squirrel, who with himself will make affidavit to the facts. At this rate, it would not take long for an industrious family of squirrels to eat up a crop of grain. Estimating that a squirrel will fill his pouch, take it to his hole and empty it every five minutes, taking three-fourths of an ounce at each load, he would get away with eight pounds in a day of 12 hours, and a colony of 100 of them would, inside of three weeks, steal nearly six tons, worth at present prices \$70 dollars. As there is scarcely a farm in the county that has not at least from one to five hundred squirrels, it can readily be seen how much destruction these pests are capable of doing. In this county alone the squirrels can be enumerated by the million, each one capable of doing at least one dollar's worth of damage in a season. The necessity for a united, relentless and systematic warfare upon these destructive little animals is apparent, and should demand the serious attention of the farmers. But unless all farmers poison their

squirrels it is almost useless for one to do it. They breed as rapidly as fleas, and an industrious pair will soon populate a whole county.

DESTRUCTIVE INSECTS BILL.

The following is the full text of the Bill for preventing the introduction and spreading of insects destructive to crops.

GREAT BRITAIN.

1. The Lords and others of Her Majesty's Most Honourable Privy Council (in this Act referred to as the Privy Council) may from time to time make such Orders as they think expedient for preventing the introduction into Great Britain of the insect designated as *Doryphora decemlineata*, and commonly called the Colorado beetle.

Any such Order, if the Privy Council think fit, may prohibit or regulate the landing in Great Britain of potatoes or of the stalks and leaves of potatoes, or other vegetable substance, or other article, brought from any place out of Great Britain, the landing whereof may appear to the Privy Council likely to introduce the said insect into Great Britain, and may direct or authorize the destruction of any such article, if landed.

If any person lands or attempts to land any article in contravention of any Order under this Act, such article shall be liable to be forfeited in like manner as goods the importation whereof is prohibited by the Acts relating to the customs are liable to be forfeited; and the person so offending shall be liable, according to those Acts, to such penalties as are imposed on persons importing or attempting to import goods the importation whereof is prohibited by those Acts.

2. The Privy Council may from time to time make such Orders as they think expedient for preventing the spreading in Great Britain of the said insect.

Any such Order may, if the Privy Council think fit, direct or authorize the removal or destruction of any crop of potatoes or other crop or substance on which the said insect, in any stage of existence, is found, or to or by means of which the said insect may appear to the Privy Council likely to spread, and the entering on any lands for the purpose of such removal or destruction, or for the purpose of any examination or inquiry authorised by the Order, or for any other purpose of the Order.

Any such Order may, if the Privy Council think fit, prohibit the selling, or exposing or offering for sale, of living specimens of the said insect, in any stage of existence, or the distribution in any other manner of such specimens.

Any such Order may impose penalties for offences against the Order, not exceeding £10 for any offence; and those penalties shall by virtue of this Act be recoverable, with costs, on summary conviction before two justices of the peace, and shall be applied as penalties recovered under the Contagious Diseases (Animals) Act, 1869, are applicable.

3. Where by any Order under this Act, the Privy Council direct or authorize the removal or destruction of any crop they may direct or authorize the payment by the Local Authority of compensation for the crop; and the Local Authority shall may the same, subject and according to the following provisions:

(1.) In the case of a crop on which the said insect, in any stage of existence, is found, the compensation shall not exceed one half of the value of the crop.

(2.) In every other case the compensation shall not exceed three-fourths of the value of the crop.

(3.) The value of the crop shall in each case be taken to be the value which, in ordinary circumstances, the crop would have had at the time of its removal or destruction.

(4.) The Local Authority may, if they think fit, require the value of the crop to be ascertained by their officers or by arbitration.

(5.) The Local Authority may, if they think fit, withhold compensation if, in relation to the crop, the owner or the person having charge thereof, has, in their judgment, done anything in contravention of, or failed to do anything in compliance with, any Order under this Act.

4. The Local Authorities under the Contagious Diseases (Animals) Act, 1869, with their respective districts, local rates,

clerk, and committees, shall be, in like manner, Local Authorities for the purposes of this Act.

The Privy Council may, if they think fit, require a Local Authority to carry into effect any Order of the Privy Council under this Act.

The expenses incurred and compensation paid by a Local Authority in pursuance of any Order under this Act shall be paid by them out of the local rate.

Every Local Authority shall keep, in such manner and form as the Privy Council from time to time by Order direct, a record relative to proceedings in pursuance of any Order under this Act, stating the date of the removal or destruction of any crop or substance, and other proper particulars, which record shall be admitted in evidence.

5. Every Order of the Privy Council under this Act shall be published, if it relates to England, in the *London Gazette*, and if it relates to Scotland, in the *Edinburgh Gazette*; save that, where the Order affects only specified lands, the insertion in the *London or Edinburgh Gazette* (as the case may require) of a notice of the making of the Order shall be sufficient.

Any Order of the Privy Council under this Act shall be published by any Local Authority, to whom it is sent by the Privy Council for publication, in such manner as the Privy Council direct, and, subject to, or in the absence of, any such direction, in such manner as the Local Authority think sufficient and proper to ensure publicity.

6. The powers by this Act conferred on the Privy Council may be exercised by any two or more of the Lords and others of the Privy Council, and, as regards the making of Orders affecting only specified lands, may be exercised by the Lord President or one of Her Majesty's Principal Secretaries of State.

IRELAND.

7. The foregoing provisions of this Act shall apply to Ireland, as if Ireland were named therein instead of Great Britain, but subject to the provisions of this section:

(1.) The powers conferred on the Privy Council shall be vested in the Lord-Lieutenant, or other chief governor or governors, of Ireland, acting by the advice of Her Majesty's Privy Council in Ireland.

(2.) The Local Authorities shall be the boards of guardians of the several poor-law unions.

(3.) The expenses incurred and compensation paid by a Local Authority shall be paid by the treasurer of the union out of union funds; that is to say, out of any money in his hands to the credit of the guardians of the union, and if there is not sufficient money in his hands, then out of the money next received by him and placed to their credit.

(4.) Penalties (other than penalties recoverable under the Acts relating to the Customs) shall be recovered in a summary manner, and shall be applied according to the provisions of the Fines Act (Ireland), 1851, and any Act amending the same.

(5.) Orders shall be published in the *Dublin Gazette*.

GENERAL.

8. Every Order under this Act shall be laid before both Houses of Parliament within 10 days after the making thereof, if Parliament is then sitting, and if not, then within 10 days after the next meeting of Parliament.

9. The expenses of the execution of this Act, other than expenses and compensation paid by Local Authorities, shall be paid out of money to be provided by Parliament.

10. This Act may be cited as the Destructive Insects Act 1877.

THE COLORADO BEETLE.

Mr. Vernon Gregg writes to *The Times*, under date Milford, New Jersey, United States, Aug. 8: "It is really amusing to read in the columns of the British Press the vast importance you attach to our insitations. Here, for instance, is the Colorado beetle, or, as it is termed in common parlance, the 'Potato bug,' which, like the skunk, we claim as an original production of this Continent, for whose anticipated arrival you are preparing such a warm reception. Now, I grant that the bug is not a profitable acquisition, at least, we have not utilised him to any great extent as yet; still, there is no use making a bugbear of him. This is my third year of intimate intercourse with him. He makes his appearance with the potato tops in perfect form, full dress, and in pairs they flit from plant to plant quickly, the female leaving little orange mementoes on the under side of the leaves, not only of potatoes, but of weeds and even dead leaves without hurting the plants themselves; but in a few days a new race appear which eat all before them, and so on through the season. Now, the enlightened Granger of this great Republic, instead of going into fits, goes into the drug store, and having got a pound or two of Paris green (not Prussian blue), as he may require, takes his watering pot with a very fine sprinkler attached, fills it with water, adds a tea-spoonful of the green, and keeping it stirred, lets a small jet fall on each plant, say in the evening, and then retires calmly to sleep. In the dewy morn he goes to his patch, but the host of the past evening lies scattered and strewn." This he repeats at intervals, and if the weather is good, as this season, the crop is simply enormous. We also use the green mixed with any poor flour and sifted on lightly, while the dew is on; it forms a paste which will not wash off for weeks. Of course there are some people who will not use the 'pizen,' just as there are people in England who will not have their children vaccinated, and we have a neighbour who is too conscientious to destroy what the Almighty sends, though he confessed to carrying the water for those who did, and most likely paid for the 'pizen' in an indirect way, for conscience sake. My potato vines are covered with a third brood at present writing, and it will take the balance of a pound of green to finish them for this season, and raise, say, 50 bushels of tubers, the green costing 40 cents, or 20 pence, so that the remedy is not only simple, but cheap, and with proper care perfectly safe in the hands of one of average intelligence. Now to compare this affliction with the drought of last sum-

mer would be as a mosquito to an elephant. And though we have been eating Paris green, according to some learned authorities, for three years, we still live. It would seem sometimes as if it had become a recreation for idiots to advise farmers. For instance, as a cure for the cabbage worm, we were told that coal-oil was a sovereign remedy, and a dupe writes to say that he had lost several thousands of plants by the experiment. A late number of an agricultural paper had an illustrated article on 'How to Milk,' and as 'It is never too late to learn,' the artist teaches us in the engraving that we have been all these years milking on the wrong side of the cow."—"M. G." writes to us from Eastbourne: "As a resident of a district in the United States which is infested by the Colorado beetle, I have taken much interest in the measures adopted there to stay the ravages of this insect. My first visit to an infected field was at a country place of my brother's, near the city of New York, early in the present month. One of his fields of potatoes, about an acre in extent, literally swarmed with beetles in every stage of existence. The vines were nearly full grown, and at a little distance looked healthy, and it was only by close inspection that I discovered the presence of the insect and the damage it was doing. Supposing that the crop would be lost, I asked if there was no means of arresting its destruction. The reply was that the crop was in no danger, and that after one or two dressings of Paris green every beetle would disappear. On the following day the vines were sprinkled with a solution of Paris green, about one ounce being put in a watering-pot which contained three gallons of water. On the following morning I again examined the vines, and found, to my surprise, that the insects were dead, great numbers having fallen to the ground. A week later, on August 9, the field presented the appearance of perfect health, and it was thought that a second sprinkling would not be required. My brother, who is a physician, assured me that no danger whatever could arise from the use of Paris green in the diluted form in which it was applied. The place referred to is in what may be called the heart of the infected district. Yet potatoes of this year's growth and of the very finest quality were being sold there at 30 cents per bushel, 15d. English. In the markets of New York city, on the 9th of August, I saw potatoes of the best quality on sale at 1½ dollar, 6s. English, per barrel (about three bushels), and the market was tending down-

ward."—Mr. J. E. Mayall, writing from Stork's Nest, Lancing, Sussex, sends us a consignment of dead "Colorado Beetles," he has received from Dr. Hollick, of New York, with the following letter: "Seeing in your paper so much about the Colorado beetle, or potato bug, and seeing in my garden such a crowd of them, I thought, perhaps, a few genuine specimens might interest you or your friends. I gathered a handful, scalded and dried them, and here they are. Should like to take a contract to send any number of bushels of them. They have eaten me out of potatoes, and we are now fighting them off from the egg plants and tomatoes. They attack all solanaceae, even deadly nightshade. Principal characteristic unboumdedly prolific, destructive. One will destroy 20 times his weight in a day. Can't you get a Bull from the Pope against them. They are no joke, I tell you. I saw them this morning on the Docks falling into the sea by thousands, and all heading due east; so look out."—At the Richmond (Surrey) Petty Sessions, on Wednesday, the clerk (Mr. Josiah Cartledge) said that last week he laid before the bench an Order in Council with reference to the Colorado beetle. He asked if the police had received any instructions on the subject. Acting Inspector Clarke said that they had received instructions to the effect that any person finding a Colorado beetle should give notice thereof to a police-constable, the constable should give notice thereof with all practical speed to the local authority, and the local authority should give notice thereof by telegraph to the Privy Council (A laugh). He asked who was to be considered the "local authority?" The clerk said he thought the magistrates were. He observed that while the Act prohibited keeping the beetle, it did not state that it was to be killed. He suggested that while the "red-tapeism" referred to was being carried out, the police should also be instructed to kill the beetle if the person finding it had not done so. The magistrates gave instructions to that effect to the acting inspector, adding that the beetle should be destroyed in such a way as not to prevent its being identified afterwards.

The Board of Trade have received a copy of a decree of the President of the French Republic prohibiting the importation of potatoes into France from Germany in consequence of the appearance of the Colorado beetle in that country. Dr. D. G. F. Macdonald writes:—"The much dreaded invasion of the Colorado beetle continues to attract public attention, although I do not think there is cause for such intense alarm, because the circumstances which are favourable to its development in America are wanting in this country. Although it has a powerful migratory instinct, I very much doubt if it can propagate in such numbers in our variable climate as to cause any serious damage to the potato, especially in the face of many parasites, and its natural enemy the rook. Mr. Frank Buckland says, 'Spare the rook and you stamp out the beetle.' From my own experience as a farmer I know that we have few better friends than the much-despised rook, who plays an important part in the great world of nature, and I verily believe were this one species of bird extinct to-morrow that the labour of the husbandman would be nearly all in vain. In America the potato beetle is known to ravage within a limited area or zone only where the summer and winter temperatures range to about the same mean in the year, and from the knowledge I acquired of the habits of the creature when travelling in the States I do not believe that it can become acclimatised in this country at all, the climate here being so very different from the atmosphere in its native home. About October the perfect beetle in America leaves the surface and hibernates at a depth at which I think the rain of our winter and spring would infallibly drown it. The Colorado beetle is not by any means a new genus of insect. It has long been known. How comes it, then, that we are only now alarmed about the stranger invading this country and becoming a national calamity? Several eminent entomologists confirm my views to a very considerable extent, such as Mr. Andrew Murray, Mr. Henry Walter Bates, &c. Now, sir, whilst I think it is right to be prepared—to be forearmed after being forewarned—yet I much fear the stringent measures sanctioned by our legislators when somewhat panic-stricken may be put in force too inflexibly, without due regard to the interests of the general community, and thus stop the importation of a most precious vegetable so important to the masses of the people at the time when food is already so dear. I trust, therefore, though I see no reason for such great alarm, that

more information may be published in the press about the habits of this dreaded foe, and that my views may be supported by other distinguished entomologists than those I have named, so that the Privy Council may be induced not to enforce the illimitable powers given by Parliament in the Destructive Insects Bill rigorously. Any measures that interfere unduly with the free importation of potatoes, which form the common food of the great bulk of the population of Great Britain, would indeed be a misfortune to the entire nation. Let it once be clearly shown that the Colorado beetle cannot exist in the mother country in numbers to commit serious ravages on the potato plant, and not only will the alarm subside, but the prohibitions on landing potatoes and other vegetable substances on our shores will be relaxed, if not altogether abrogated."

THE POST OFFICE.—The report of the Postmaster General for 1876 has been issued, and, as usual, is a very interesting and instructive document. The correspondence of the kingdom is so extensive that the number of letters posted is equivalent to 31 per head of the population. This is exclusive of book packets, newspapers, and post-cards, of which some millions pass through the post. There were over five million registered letters, but notwithstanding this, a very large number of letters containing valuables are posted without registration. Thirty-three thousand were dispatched—such is the carelessness of some people—without any addresses at all, and of this number 832 contained £390 in cash and bank notes, and £5,000 in cheques. A letter containing £8,000 addressed to a bank, was discovered unfastened; while, to conclude the catalogue of carelessness, 78,575 postage stamps were insecurely stuck on the letters; while upwards of 14,000 articles were found without covers. Among the curiosities of the contents of the mail bags was a live snake found in the Holyhead and Kingston Marine Post-office, and it speaks volumes for the care of the Post-office officials that this unwelcome passenger was carefully kept alive in the hope of being claimed. No person, however, came forward to own the reptile, which was forwarded to the Zoological Gardens. There is a remarkable fact commented on in the report, and that is the antipathy which appears to exist between dogs and postmen. These hard-worked officials seem more than any other class to be liable to attack, whether this is attributable to their uniform the Postmaster cannot decide. But in one town in the north of England it appears that more than 20 per cent. of the postmen were bitten by dogs. Cheap as postage is, the ingenuity to avoid payment exercised by the public is something extraordinary. Postage stamps, cigars, collars, sermons, stockings, lace, and even gold coins have been frequently found in the half-penny wrapper folded round a newspaper. With all these temptations it is wonderful that the number of missing articles is not greater.

PARIS EXHIBITION, 1878.—The grand central building which is intended to be permanent, already presents a fine effect; the walls are carried to their full height, and the skeleton of the iron roof is being fast got into place. The dome, which is to surmount the central building, will be about 110 to 120 feet in diameter, and the massive stone walls, constructed of enormous blocks, which are to support the dome at the height of about seventy feet from the surface of the hill, have a grand effect. The wings of the building have the iron-work of the roof all in place. Two fine square *salles*, one on each side, have five columns of brilliantly polished stone of the Jura, protected at present by thick coats of straw. The grand colonnade, which forms a highly important feature in the design, has all its columns in place, and the cornice is being executed rapidly. The difficulties which surrounded these gigantic works on the Trocadere were greatly enhanced by the fact that the hill had been honeycombed beneath for the stone, which it contained ages ago, and the workmen discovered not long since that the old quarries had not completed their working, for in excavating for the basin of the grand fountain they came upon a fine stratum of stone which will go far to defray the expenses of this part of the works. The awards in the divisions of Agriculture and Industry are set down as follows:—One hundred Grand Prizes and exceptional pecuniary awards; one thousand Gold Medals; four hundred Silver Medals; eight hundred Bronze Medals; and eight hundred Honourable Mentions.—*Trade Marks.*

AGRICULTURAL SOCIETIES.

CHESHIRE.

MEETING AT CREWE.

The 39th annual show of the Cheshire Agricultural Society, the patron of which is the Duke of Westminster, K.G., and the president for the year, Baron Tollemaache, of Helmingham, was opened on Sept. 14, at Crewe, and though there was a slight falling off in the exhibition compared with that of the previous year, it was an extremely creditable one. The entries, as compared with the previous year, shows the following result: The total number of entries in the general show is 399, as against 362 last year; and an analysis shows the comparative entries as follows—Cheese, 46, against 29; butter, 12, against 11; horses, 163, against 131; cattle, 84, against 69; sheep, 66, against 69; and pigs 20 against 21.

The show of stock was, on the whole, a very good one, and one of the judges remarked that it was "the best show the Society ever had." In the open class the Shorthorns, although not large in the matter of quantity, were of the finest quality. The bulls shown by the residents in the county were unusually good, and the competition was so strong that the judges had, so to speak, to resort to the "casting vote" of the referee, Mr. Saxton, of Wersted Hall, Suffolk. The dairy cows were also a good class, and the heifer calves were of remarkably good quality.

The exhibition of horses is generally pronounced the best that has been seen at any show of the Cheshire, more particularly as concerns the draught horses, which are of exceptional quality. Two draught horses shown by Mr. Meadows, of Itainhill, near Liverpool, in this class, were universally admired for their symmetry and extraordinary girth. In this class there was another exceptional feature, three horses which obtained prizes at the last show of the Royal Agricultural Society at Liverpool; and a competent judge remarked, concerning these, that they were, beyond dispute, the three best cart horses in England, barring the one belonging to Lord Ellesmere, which won the champion prize of £50 at Liverpool. In the classes for brood mares for breeding hunters, prizes were given by the Duke of Westminster, the entries were numerous, and the quality excellent. The geldings for hunting purposes were equal in quality to the brood mares, and the cobs and ponies, though small in number, were very meritorious classes.

Of sheep there was a really excellent show, and it would be difficult to say which were the principal features in it. The only faulty lot in it were the shearling rams, some of which looked especially weak and poor. With this exception the whole class was remarkably good. The pens of long-woolled ewes of any age were a splendid lot of animals, quality being good and superb in shape and wool. The short-woolled rams of any age were a well-represented class, and the same was the case with the class for long-woolled tup lambs. There was also a good show of long-woolled ewes and shearling ewes. The short-woolled rams were a very creditable lot, and the short-woolled tup lambs both a large class in number and of more than ordinary quality. All the other classes were well represented.

The show of pigs was smaller in point of the number of entries by one than it was last year, but the quality of the exhibits was above the usual merit at the shows of the Cheshire Society. The whole class of small breed boars, of any age, was good, and special features in it were the entries by Lieut.-Colonel B. G. D. Cooke, of Colomendy

Mold. The large breed boars were a good class, and so were the breeding sows and the pairs of gilts. The litters of large breeds of pigs were but indifferent. All the classes in the small-breeds pigs were good both in number and in quality.

The competition for cheese was thrown open; and the consequence was that several exhibits were sent from a distance. We noticed cheese from Wiltshire and Staffordshire. The entries of most of the classes were numerous, and the quality of the cheese was very much above the average. One of the judges—who said he had been a judge of cheese at shows for many years—pronounced it the best he had ever seen at the Cheshire Show, and the general opinion was that it was much superior in quality to the cheese at the Liverpool Show of the Royal Agricultural Society. The exhibitions in the better class was not numerous, being only 13, but the quality, as a whole, was very good.

PRIZE LIST.

JUDGES.—AGRICULTURAL HORSES: Mr. Bromley, Lancaster, Mr. Edwards, Hoole, near Chester. **HUNTERS AND ROADSTERS:** Capt. Massey, Alveston, Nantwich; Mr. C. Kay, Davenham Hall. **CATTLE:** Mr. Bell, Bodryhyddan Rhy; Mr. Cheetham, Norbury, Stockport. **SHEEP:** Mr. R. Bourne, Astbury; Mr. W. Carter, Lattwyke, Stafford. **PIGS:** Mr. Gamon, Chester; Mr. Walker, Derby. **CHEESE AND BUTTER:** Mr. Barzakh, Manchester; Mr. Bale, Tarporley.

HORSES.

FOR AGRICULTURAL PURPOSES.

Pair of horses.—First prize, £6, J. Robinson, Earnshaw Grange, Northwich; second, £4, R. Nicholson, jun., Blacon Point, Chester.

Mare or gelding.—First prize, £4, T. R. Jackson, Tattenhall Hall; second, £3, R. Nicholson, jun.

Brood mare, with foal at her feet.—First prize, £5, S. Wade, Utlington Hall, Tarporley; second, £3, G. Chadwick, Lawton.

Two years old gelding or filly.—First prize, £3, S. Wade; second, £2, Sir P. De Malpas Grey Egerton, Bart., M.P., Oulton Park, Tarporley.

Yearling gelding, or filly.—First prize, £2, J. Wright, Church Minshall; second, £1, J. Beecroft, Upton, Chester.

Mare or gelding, as a roadster.—First prize, £5, J. Cousins, Sandiway, Northwich; second, £3, W. Wright, Earle-street, Crewe.

Cart or draught stallion, of any age.—First prize, £10, W. Wynn, Stratford-on-Avon; second, £5, J. F. Crowther, Mitfield, Yorkshire.

Thoroughbred stallions, of any age, for road or hunting purposes.—First prize, £10, J. Poinson, Tarporley; second, £5, S. L. Radford, Willaston, Chester (prize withheld until owner proves him thoroughbred).

Pair of cart or draught horses, either mares or geldings.—First prize, £10, W. A. Meadows, Rainhill.

Brood mares, for breeding hunters.—First prize, £4, G. F. Statter, Whitefield, Prestwich.

Four-year-old mares or geldings, for hunting purposes.—First prize, £5, W. Mettram, Nantwich.

JUMPING.

Mares or geldings as the best performers as hunters.—First prize, £6, W. Dudworth, Audlem; second, £3, J. Cousins, Sandiway, Northwich.

Farmers' jumping prize, given by the Society.—First prize, £10, S. H. Bolshaw, Minshall Hall, Middlewich; second, £5, T. Johnson, Manor Farm, Malpas; third, £3, O. F. Statter, Whitefield, Prestwich.

CATTLE.

SHORTHORNS.

Bulls, above two years old.—First prize, £10, Earl of Ellesmere, Manchester; second, £5, T. Atkinson, Unsworth, Manchester.

Bulls, above one and under two years old.—First prize, £10, T. Coomer, Basford, Nantwich; second, £5, Stand Stud Company, Whitefield, Manchester.

Cows, in milk or in calf, of any age.—First prize, £10, P. H. Cheaters, Nantwich; second, £5, Stand Stud Company.

Heifers, under three years old.—First prize, £10, Stand Stud Company; second, £5, Earl of Ellesmere.

CHEESE.

Dairy of cheese, either old or new, and not less than 50lbs. weight each.—First prize, £10, J. Brereton, Harthill; second, £6, Mrs. E. Williamson, Chorley, Nantwich; third, £3, W. Swettenham, Sound, Wrenbury.

Dairy of new cheese, not less than £30lbs., nor more than 50lbs. weight each.—First prize, £4, J. Challinor, Nantwich; second, £3, J. Wood, Over; third, £1, J. Cornes, Spurstow, Tarporley.

Dairy of cheese, averaging 40lbs. each.—Prize, £12, J. S. Vernon, Bunbury, Tarporley.

Dairy of cheese, not on the average exceeding 40lbs. weight each.—Prize, G. Marrow, Eccleston, Middlewich.

BUTTER.

Six dishes of butter, made by the exhibitor.—First prize, £3, A. Cooke, Sound, Nantwich; second, £1 10s., J. S. Vernon; third, £1, T. L. Hill, Blakelow, Nantwich.

The attendance in the early part of the day was but small, but in the afternoon it increased considerably, and before the yard closed there was a large number of visitors registered at the gates. Thanks to the exertions of the energetic Secretary, Mr. Beckett, and the members of the committee, no discomfort was experienced, and the whole of the proceedings passed off in a most satisfactory manner.—Abridged from *The Chester Chronicle*.

CHADDERTON.

The fifth annual show of the Chadderton Agricultural Society was held on Sept. 17, at Mooton Park. In point of number the entries, amounting in every department to £48, were about 80 in excess of those of last year, and with respect to the quality this exhibition was fairly up to the average. Cattle numbered 31; horses, 137; donkeys, 8; pigs, 6; poultry and pigeons, 144; rabbits and dogs, 99; and there was also a good show of dairy produce, flowers, roots, and implements. The sum given in prizes was nearly £400. The following were the chief prizes awarded:—District competition: Bull under two years old, J. L. Becker, Foxenden Hall; dairy cow, M. Meanook, Thornham; two-year-old heifer, J. L. Becker; one-year-old heifer, J. Stansfield, Oldham; heifer calf, J. Stansfield; two dairy cows, T. Howard, Royton; geld cow, J. Huddleston, Failsworth. General competition: Bull under two years old, Stand Stud Co., Whitefield; bull under 18 months, Stand Stud Co.; dairy cow, Stand Stud Co.; two-year-old heifer, Stand Stud Co.; one-year-old heifer, Stand Stud Co.; two dairy cows, Stand Stud Co.; geld cow, Stand Stud Co. Horses.—District competition: Agricultural stallion, S. Sidebottom, Rochdale; brood mare, S. Cheetham and Co., Middleton; mare or geld, not exceeding 16 hands, S. Sidebottom; mare or geld, not exceeding 17 hands, Braybrook and Kershaw, Oldham. Plough horses, J. and S. Lees, Chadderton; three-year-old gelding or filly, J. Hilton, two-year-old gelding or filly, W. Franklin, Royton; one-year-old gelding or filly, S. Cheetham and Co.; weaning colt, S. Cheetham and Co. General competition: Agricultural stallion, Stand Stud Co.; brood mare, P. Booth, Chadderton; mare or gelding, not exceeding 16 hands, J. Burdley, Lees; mare or gelding, not exceeding 17 hands, C. W. Brierley, Freatwich; pair of horses, C. W. Brierley; three-year-old gelding or filly, Stand Stud Co.; two-year-old gelding or filly, Stand Stud Co.; one-year-old gelding or filly, Stand Stud Co.; weaning colt, S. Cheetham and Co. Road or field horses: Brood mare, R. W. Buckley, Hollinwood; mare or gelding, J. W. Radcliffe, Oldham; two-year-old gelding or filly, W. Mills, Radcliffe; one-year-old gelding or filly, J. Wardleworth, Bury; weaning colt, R. Ashton, Hollinwood. Cobs and ponies: mare or gelding, not exceeding 14½ hands, J. W. Radcliffe; not exceeding 12½ hands, A. Ashton, Middleton. Best foal got by Farmer's Friend, W. Johnston, Rochdale. Turnouts: Stand Stud Co. The first prizes for pigs were won by Mr. J.

Jones (Oldham) and Mr. W. Shaw (Failsworth), and a silver cup, given for the best pack of harriers, was awarded to Mr. T. A. Harrison, Stalybridge. The show was visited during the day by a large number of people.—*Manchester Examiner*.

DERBYSHIRE.

The annual Show in connection with the Derbyshire Agricultural and Horticultural Society, which was opened on Sept. 16, was continued on the 19th; the horses and cattle which were not exhibited on the previous day were sent in for competition. Though the sky was overcast during the whole day, and though a slight and transient shower of rain fell in the afternoon, the weather was not, on the whole, unfavourable for the success of the exhibition. As regards the number of persons who paid for admission at the gates, from the moment that the Show was opened till the time when it was closed in the evening a continuous stream of people poured into the Cattle Market, which consequently presented a very animated appearance that was not lessened by the unusually large number of booths which were erected in different parts of the ground for the sale of "notions" and the amusement of simple-minded swains. All the approaches to the Show were filled with these erections, flags and banners floated from numerous windows, and a great portion of the town bore a holiday appearance. Visitors to the show, as we have already indicated, were very numerous, and on this account the faulty arrangements for the admission of the public to the Market must be deprecated. Ingress could only be obtained by means of one or two very narrow gateways, through which only one person could pass at a time, and consequently when the pressure of the crowd was great—as indeed it was all day—a number of ladies and others were somewhat humbled about. Any discomfort experienced in this way, however, was compensated for by the really splendid exhibition of stock inside the grounds. The cattle and horses were very numerous, and the quality was superior in most cases to what has been witnessed at any previous Show held under the auspices of this Society. Indeed, on no former occasion have the efforts of the committee—who have been most indefatigable in their exertions—been crowned with such signal success, and the fact that it was found necessary to extend the Show over two days, in place of limiting it to one day, sufficiently shows that the Society is becoming more prosperous. The implements were specially deserving of notice, and the field in which they were placed was visited by large numbers of persons. In all the different classes of stock and horses the Show of Wednesday may be pronounced as of a superior description. Some good heifers were sent in for competition, and Mr. T. E. Stevenson, as will be seen from the prize list which follows hereon, was awarded first honours for a splendid animal aged two years and seven months. For stirkes under two years belonging to a tenant farmer there was only one competitor—Mr. Carrington—who of course carried off the prize offered for this class, and Mr. T. H. Oakes obtained first prize in the same class for members of the Society who owned not less than 12 cows. Very few calves were forwarded, and Mr. Oakes obtained the first place. The best Shorthorned bull class, for three years old and upwards, comprised some really good animals, and the judges, who had some difficulty in making their award, ultimately decided in favour of Mr. Oakes, who was indeed extremely fortunate in obtaining prizes in various departments of the Show, having sent for competition a number of unusually good cattle. The different classes of horses were above the average, but the interest of the non-professional portion of the visitors was centred in the jumping competition, which commenced at two o'clock

with an enclosure, for which an extra charge for admission was made. The following is the prize list:—

CATTLE.**DAIRY COWS.**

Four cows for dairy purposes.—First prize and silver cup, J. H. Oakes, Riddings House; second, T. Hopkinson, Woodthorpe.

Two cows for dairy purposes.—First, second, and third prize, E. Vale, Rose Hill.

Pure bred Shorthorn cow, having had a living calf since January, 1st, 1877.—First prize, T. H. Oakes; second, W. T. Carrington, Croxden; third, T. Briggs, Fisherwick, Lichfield.

HEIFERS.

Pair of heifers under three years old.—First prize, T. E. Stevenson, Ashby; second, Colonel Milin, Bagworth; third, W. T. Carrington, Croxden Abbey.

Pair of in-calf heifers, belonging to a tenant farmer, dairying not less than twelve cows.—First prize, E. Vale, Rose Hill; second, W. T. Carrington, Croxden Abbey; third, W. Tomlinson, Stanley.

STIRKS.

Pair of stirks under two years old, most adapted for dairy purposes, belonging to a tenant farmer.—Prize, W. T. Carrington, Croxden Abbey.

Pair of stirks under two years old, most adapted for dairy purposes, belonging to members not dairying less than twelve cows, and bred by exhibitor.—First prize, P. H. Oakes, Riddings House; second, M. T. Hopkinson, Woodthorpe; third, W. T. Carrington, Croxden Abbey.

CALVES.

Rearing cow calves, bred by the exhibitor since January 1st 1877.—First prize, T. H. Oakes, Riddings House; second, G. M. Dixon, Bradley Hall.

BONSHORNS.

Ball of any age.—Prize, R. Hall, Walton-on-Trent.

Pair of dairy cows in milk.—Prize, R. Hall, Walton-on-Trent.

Pair of heifers, over two and under three years old, in-calf.—R. Hall.

Pair of heifers, two-years-old.—Prize, R. Hall.

SHORTHORNS.

Shorthorned bull, three-years-old and upwards.—First prize, T. H. Oakes, Riddings House; second, W. Harrison, Eoton Park.

Shorthorned bull, two-years-old, and not exceeding three years.—First prize, E. Vale, Rose Hill; second, R. Briggs, Alvaston; third, R. Hall, jun., Howick House, Whaley Bridge.

Yearling (or not exceeding two years old) bull, of the pure Shorthorn breed, most suitable for breeding purposes.—First prize, W. T. Carrington, Croxden Abbey; second, W. Hollingsworth, Stanton Grove; third, E. M. Mandy, Shipley Hall.

Ball calf, not exceeding twelve months old.—First prize, W. T. Carrington; second, H. Chandos Pole-Gell, Mopton Hall.

FAT STOCK.

Fat beast of any breed.—First prize, Col. Ellis, Bagworth; second, R. Ratcliffe, Newton Hall; third, Col. Ellis, Ellistown Farm, Bagworth.

Ball and three cows, of any age, the property of a member. Any of the cows above two years to be in milk or in calf at the time of show.—First prize, T. H. Oakes, Riddings House; second, M. T. Hopkinson, Woodthorpe; third, T. H. Oakes.

HORSES.

Brood mare and foal for agricultural purposes.—A special prize of five pounds, given by Mr. J. Mayer, for the best foal by either of his horses for 1876. Also a special prize of five pounds, given by Mr. Tomlinson, for the best foal by Farmer's Glory for 1876.—First prize, T. Orme, Hoon Loston; second, Mr. Samelov, Ticknall; third, W. Chandos-Pole Gell, Mouton Hall. Mr. Tomlinson's prize—J. Hellaby, Twyford Mr. Mayer's prize—Mr. Chambers.

Two-year-old gelding for agricultural purposes.—First prize, R. Ratcliffe, Newton Hall; second, J. Hellaby.

Two-year-old filly for agricultural purposes.—First prize, J. Thompson, Melbourne; second, B. Hind, Mickleover.

One-year-old gelding for agricultural purposes.—First and second prizes, S. Wade, Mickleover.

One-year-old filly for agricultural purposes.—First prize, J. Hakeworth, Barton; second, W. Flint, Smealy.

Pair of horses, for agricultural purposes.—First prize, W. Barber, Congerstone; second, and third, T. H. Oakes, Riddings House.

Brood mare, best fitted for breeding hunters, with foal at foot.—First prize, J. Smith, Weston-on-Trent; second, S. W. Cox, Spondon.

Hack above four years.—First prize, R. G. Buckstone, Derby; second, J. Cowlishaw, Ashby.

Gelding or filly, of the value of £40, not thoroughbred, above three and under four years of age, for hunting purposes.—Prize, E. Hill, Shottle.

JUMPING CLASSES.

Jumpor.—First prize, A. O. Worthington, Needwood; second, J. H. Gascoyne, Littleover; third, W. Haywood, Inctock.

Horse or mare, not more than three years old, for hunting or riding purposes, bred within the Society's district.—First prize, S. Robson, Melbourne; second, W. Hollingsworth, Alfreton.

Two-year-old for hunting purposes.—First prize, A. O. Worthington; second, J. T. Martin, Derby.

Yearling colt or filly.—First prize, Mr. Newbold, Milton; second, W. Robinson, Tateshill, Barton.

Cob, not exceeding 14½ hands.—First prize, O. E. Part Derby; second, G. Holbrook, Attenborough.

Hunter, equal to 15 stone.—First prize, M. Walwyn, Osmaston; second, S. Burditt, jun., Chesterfield.

Heater, four years old and upwards, equal to 13 stone.—First prize, W. Wright, Wellaton; second, J. Fenton, Shardlow; third, S. Robson, Melbourne.

SHEEP (LONG-WOOLLED).

Five breeding ewes, having had lambs in 1877, and suckled them to the 1st of June.—First prize, Mr. Newbold, Milton; second, R. Johnson, Kirk Ireton; third, Mr. Newbold, Milton.

Five long-woolled theaves.—First prize, R. Johnson, Kirk Ireton; second, J. Bryer, Vicar Wood; third, J. Grammar, Sawley.

Class 39.—First prize, J. Grammar; second, J. Sketchley, Ambaston.

Long-woolled ram, of any age above a shearing, *bona-fide* the property of the exhibitor at the time of entry.—First prize, R. Johnson, Kirk Ireton; second, R. Johnson; third, R. Johnson.

Shearling long-woolled ram.—First prize, R. Johnson; second, R. Lee, Knaveton; third, R. Johnson.

Long-woolled ram-lamb.—First prize, R. Johnson; second, J. Mallor, Allow Mill.

SHORT-WOOLLED.

Five breeding ewes, having had lambs in 1877, and suckled them up to the 1st of June.—First prize, G. German, Normanton-le-Heath; second, C. Smith, Langley; third, J. Rose, The Ash, Etwell.

Five short-woolled theaves.—First and second prizes, W. Baker, Atherstone.

Five short-woolled ewe lambs.—First prize, C. Smith, Langley; second, Mr. Knight, Caldwell.

Short-woolled ram, of any age above a shearing.—First prize, W. Baker, Atherstone; second, C. Smith, Langley; third, W. Baker.

Shearling short-woolled ram.—First and second prizes, W. Baker; third, C. Smith, Langley.

Fen of five fat wether sheep of any breed, not exceeding 22 months old.—First prize, G. German, Normanton-le-Heath.

Three Shropshire ram-lambs.—First and second prizes, C. Smith, Langley.

PIGS.

Boar, of any age, best adapted for general use.—First prize, P. Spencer, Alvaston; second, J. B. Gregory, Chesterfield; third, W. Stevenson, Duffield.

Sow of any age.—First prize, J. Spalton, Bewbridge Farm; second, T. H. Oakes, Riddings House; third, J. Langley, Mickleover.

Three breeding pigs of one litter.—First prize, T. H. Oakes; second, W. J. Sketchley, Ambaston; third, J. Rayner, Navefield, Etwell.

Fig, the property of an agricultural labourer.—First prize, J. Startin, Brialingcote House, Barton; second, T. Carrington, Barton-road, Etwell.—*Notts Guardian*.

EASINGWOLD.

The Seventeenth Annual Exhibition of this Society was held on Sept. 19, when the attendance was greatly increased by the knowledge that the Prince of Wales, who was the guest of Sir George Wombwell, of Newburgh Park, would be present. The entries were more numerous than on some previous occasions, and the Show as a whole was considered a good one. After the luncheon Sir Henry Meysey-Thompson, who presided, gave the toast of "The Prince of Wales," and said:—"They would all be exceedingly glad to see the Prince amongst them; and he was sure that they would welcome him for many reasons—not only because he was the son of the Queen, the most popular Sovereign in the known world, as the heir to the greatest empire the world had ever known; but also as an English country gentleman—as a farmer who is deeply interested in agriculture, and coming from the East of England to see how they did up in the Easingwold district. They were, perhaps, not all aware how deeply interested in agriculture the Prince of Wales was; but his Royal Highness had commissioned him that morning to inform them that he was a great farmer, and had in his own hands nearly 800 acres of land. He was not only an extensive farmer, but he took a great interest in the general welfare of the British farmer in all parts of the kingdom. He was also a very great showman. In 1874 he won what might be called the agricultural Derby—the blue ribbon of English Shows—in having taken the first prize for cattle at Smithfield. It might satisfy their curiosity further to know that an animal was purchased by Mr. Baum, roasted, and given away to the poor at Christmas. As a proof of the great interest Sir George Wombwell took in those Shows, he might tell them that it was by the advice of Sir George that the Prince had an entry at the Yorkshire Show, in which he took first prize. The sheep his Royal Highness entered then were bred by himself on his own farm. The Prince took the greatest interest, not only in his tenants, but also in the labourers and all those connected with him. He gave prizes every year for the best cottage gardens, and prizes for other purposes for the benefit of those around him. He was always perfectly at home at a show of horses; and he was a capital judge and a hard rider to hounds. When he added to what he had said the Prince was most popular amongst those who knew him—that he was most kind of heart, and never happier than when he was making other people happy—that he was most interested in all the objects of the Show, in the breeding of stock and horses, and making two blades of grass grow where before there had been but one, and at the same time was a pleasant country gentleman—he need say no more than that he was sure they would give him the warmest welcome that Yorkshire throats could give expression to.

LONG SUTTON.

The forty-first annual Show of this Society was held on September 19th and 20th. The number of entries was larger than on any previous occasion, being: Horses, 169; cattle, 33; sheep, 32; pigs, 30; roots, 40. Amongst the exhibitors was the Prince of Wales, who sent some Southdown sheep. Of implements there was a considerable show for a local exhibition, the number of entries being 140. A horticultural exhibition, ploughing matches, and allotment judging formed features of the Show.

PRIZE LIST.

HORSES.

Cart stallions over two years old (open).—First prize, R. K. Folley, Long Sutton; second, R. Kilham, Tydd St. Mary, Wisbech.

Yearling cart colts.—First prize, C. Beart, Stow, Downham; second, J. Cook, Crowland.

Pair of draught geldings or mares.—First prize, T. Bowles, Moulton Marsh, Spalding; second, T. Dearlove, Tydd St. Giles, Wisbech.

Draught geldings or mares.—First prize, J. Whitsea, Postland, Crowland; second, C. Edwards, Outwell, Wisbech.

Mares for breeding draught horses, each having a foal.—First prize, G. Horn, Sutton St. James, Wisbech; second, W. Johnson, Walpole St. Peter's, Wisbech.

Cart foals.—First prize, C. Goy, Moulton Easingate, Spalding; second, W. Johnson.

Yearling cart geldings.—Prize, J. Tomlinson, Lutton Marsh, Long Sutton.

Two-year-old cart geldings.—Prize, R. Lawson, Spalding. Yearling cart fillies.—First prize, S. Kingston, Spalding; second, J. Waltham, Parson Drove, Wisbech.

Two-year-old cart fillies.—First prize, G. Horn; second, W. Naylor, Long Sutton.

Hackney stallions, over two years old (open).—First prize, B. Balderston, Mount Pleasant, Boston; second, B. Walz, Wimbolham, Downham Market.

Horses or mares, not under fourteen hands high, for jumping.—First prize, H. Redhead; second, G. C. I. Howard, Long Sutton.

Hackney horses or mares, over fourteen hands.—First prize, S. Campaign, jun., Deeping St. Nicholas, Spalding; second, H. Wayman, Downham.

Harness horses or mares, over fourteen hands, with park action.—First prize, H. Wayman; second, W. Giddens, Walpole, Norfolk.

Hunters, of any age (open).—First prize, F. Howard, Wisbech; second, W. S. Black, Saxby, Melton.

Mares for breeding hunters, each having a foal.—First prize, S. S. Mossop, Long Sutton; second, J. Codling, Whaplode, Spalding.

Mares for breeding roadsters, each having a foal.—First prize, G. Skelton, Long Sutton; second, G. P. Hobson, Long Sutton.

Nag foals.—First prize, J. T. Stephenson, Whaplode St. Catherine, Spalding; second, G. P. Hobson.

Yearling nag geldings.—First prize, S. S. Mossop; second, G. Clarke, Lutton Marsh, Long Sutton.

Yearling nag fillies.—First prize, G. Skelton; second, J. C. Hobson, Long Sutton.

Two-year-old nag geldings.—First prize, G. Clarke; second, S. S. Mossop.

Two-year-old nag fillies.—First prize, S. S. Mossop; second, G. Clarke.

Cubs, not exceeding fifteen, and not under fourteen hands (shown in saddle).—First prize, H. Wayman, Downham; second, J. Oldham, Frithville, Boston.

Ponies, not exceeding fourteen hands (shown in harness).—First prize, R. Bland, Boston, Market Deeping; second, R. K. Wright, Gedney Marsh.

Hunting geldings or mares, four years old or under.—First prize, G. Clarke; second, J. Tomlinson.

Harness horses or mares, any age or size.—First prize, R. Bland; second, H. Wayman.

Horses or mares, any age or size, for jumping (open).—First prize, Dr. Waller, Peterboro'; second, J. Hudson, Dutton House, Peterboro'; third, G. C. I. Howard.

Jumping.—Prize, T. Dearlove, Tydd St. Giles.

CATTLE.

Bulls above two years old.—First prize, C. W. Griffin, Werrington; second, J. Morton, Stow, Downham.

Bulls under two years old.—First prize, G. Clarke, Lutton Marsh; second, C. W. Griffin.

Cows above three years old, in calf, or having had a calf within nine months.—First prize, J. Morton; second, W. Johnson, Walpole St. Peter's.

Heifers not exceeding three years old, having had a calf or being in calf.—First prize, C. W. Griffin; second, W. Johnson.

Pair of heifers, not exceeding two years old.—First prize, C. W. Griffin; second, W. Wright, Lutton.

Pair of steers not exceeding two years old.—First prize, G. H. Fullard, Thorney; second, W. Wright.

Pair of heifers not exceeding one year old.—Prize, R. Kilham, Tydd St. Mary.

Beasts not eligible for entry in Classes 28 to 34.—First and second prize, W. O. Worth, Holbeach Marsh.

SHEEP.

Five Lincoln ewes of any age, having suckled lambs up to June 1st.—First and second prizes, W. Wright.

Five Lincoln shearling ewes.—First and second prizes, G. Horn, Sutton St. James.

Five Lincoln ewe lambs.—First and second prizes, G. Horn. Five ewe lambs, of any breed.—First prize, T. Ream, Newton; second, J. M. Dring, Long Sutton.

Five Lincoln Heder lambs.—Prize, Mrs. Portugal Tydd St. Giles.

Five Heder lambs of any breed.—First prize, J. M. Dring; second, T. Ream.

Five Lincoln shearling wethers.—First prize, J. Cooke, Crowland; second, T. Aitken, jun., Spalding.

Five shearling wethers of any breed.—G. Bettinson, Lutton; second, W. Looker, Clenchwarston.

Pen of five sheep not eligible for entry in classes 36 to 43.—First prize, J. Cook; second, J. Eastland, Walpole St. Andrew's.

PIGS.

Boars, large breed, not less than twelve months old.—First prize, J. G. Burgess, Magdalen, Lynn; second, J. Hunter, Emeth, Norfolk.

Boars, small breed, ditto.—Prize, J. Codling, Whaplode, Spalding.

Sows, large breed, having had a litter within six months, or in pig at the time of show.—First prize, W. Cannington, jun., Long Sutton; second, J. Codling; third, J. G. Hobson, Long Sutton.

Sows, small breed ditto.—First and second prizes, J. Codling.

Three gilts of one litter not exceeding six months old.—First prize, J. G. Hobson; second, C. Beart, Stow.

Three pigs, of one litter, ditto.—First prize, H. A. Kilham; second, E. B. Bettinson, Gedney.

Pigs, not eligible for entry in Classes 45 to 50.—First prize, W. Wright; second, J. Eastland.

ROOTS.

Swede turnips.—First prize, B. K. Wright, Gedney; second, G. Oldershaw, Gedney, Marsh.

Turnips, any other variety.—First prize, T. Smith, Lutton Marsh; second, T. G. Leader, Sutton Bridge.

Long red mangels.—First prize, Mr. Leader; second, J. W. Clifton, Long Sutton.

NORTHAMPTONSHIRE.

This is an eminently successful Society, and everything is admirably managed with the exception that a few of the minor details will always somehow lag behind for completion on the Show-day. As an instance, on Sept. 13, the covering, in of the "Grand Stand" was not begun till late in the morning, and it was not completed when we left the ground in the afternoon as the company took possession of the seats at the appointed time for horse parading and jumping. Fortunately there was no sun and not much rain, or the company would have had a poor shilling's worth. Then the ring for the horse-shooting was not touched till about noon on Thursday, when men were put to work and had to sweat away to get the arrangements for this operation complete in time. Whether this delay is due to one man having too much to do, or too much left to him, or whether the stewards shirk their duty, we are not informed, but, with months beforehand, it does certainly seem odd that so good a Society in such an important county should have to make a rush with work on the opening day of the Show.

Fat cattle led off at this meeting, and Mr. Wright, of Nocton Heath, Lincoln, probably did an unprecedented thing in showing three animals and fairly carrying off the first prize in each. In Class 1 his 4 years and 2 months Shorthorn ox is a roan of great size and depth of flesh, while his quarters are very evenly balanced. His weight last week was 33 cwt. 3 qrs., and, as we were informed, his girth was 9 ft. 4 in. His sire was "Double Wharfedale" (23334), his dam, according to his entry, "A pure Shorthorn cow." Mr. Wright's Shorthorn cow, four years six months of age is another well bred animal, sire "Geneva Duke," and she is of admirable form, being straight both along the back

and from her bosom to her twist. Mr. Wright's 2 years and 10 months heifer is very level and firm, and as blooming in her rich red skin as skilled feeding and attention could make her. The Earl of Lonsdale's steer is perfectly ripe at 2 years and 5 months of age, and some care will be required to keep him in form and in firm condition till the Christmas shows come on. Earl Spencer's steer 4 months under 2 years of age is a straight and level beauty. Mr. Sharp's cow, 6 year's old, is as patchy a one as we have seen in a show-yard for some time.

In the class for bulls of any age Telemachus 6th was placed first, and Hindoo Chief, a very heavy strawberry and white, was the second. In the second class John of Kent, a very large and good blood-red three-year-old, was placed before Telemachus 10th, and in the yearlings Mr. Bland's General Flirt, of fine quality and form, but with unfortunate staring horns, was placed first, and Mr. Faulkner's King of the Roses second. The latter is a very promising animal, as he has a good head and horn, is of fine quality, and a fine white and strawberry colour.

In the females Telemachina, a fine cow, with ample frame and suitable knees and hocks for a Shorthorn, was again first, to which another patchy female, Julia 11th, four years old, sent by Mr. Sharp, was placed second. There were some capital yearlings, for, in addition to the prize animals, Mr. Ashby, Naseby, Rugby, sent a very wide and deep-quartered red, of fine quality; and in the calves Mr. Griffith's Blush 8th, of the Telemachus tribe, was very promising. In Class 14 Messrs. Hope's cup for the best female (store or fat) fell to Mr. Ashby's Innocence, the cup for the best male having been previously given for Mr. Wright's large ox above mentioned.

The stallion prizes are awarded in the spring, when Young Champion, the property of Mr. Stokes, Caldecot, Rockingham, won the first, and Prince Bismarck, Mr. Jelley's Great Harrowden, the second.

The mares for hunting purposes with foal at foot came next, and the Marquis of Exeter's beautifully-topped bay, by Voltigeur, won the first. This mare has a remarkable rupture in the near flank, but it does not appear to injure her in the least. This was a very capital class of 13, and the foals were mostly of great promise. Mr. Richardson's stallion appeared as a grand ten-year-old bay, so was Mr. Bennett's chestnut mare Roma, sire Oxford, dam Area, by Gladiator.

The hunters, mare or gelding, above 5 years old, up to 15 stone, were very select. Mr. Whitehead took both prizes, the first with Vanguard, the grand chestnut gelding that took first at Huntingdon, Melton, and Peterborough. Vanguard is a grand horse for appearance, power, and style of moving. The hunters up to 12 stone were more numerous, 18 being present, and they were a capital lot. The first was by Reinfrid, sire of dam, Rochester. The second was a beautiful dark chestnut. Mr. Franklin's excellent bay mare, that was first at Alcester, on Tuesday, was out of condition, and did not show at all well, so she lost her chance on this occasion. In the four-year-olds Mr. Whitehead's Sportsman, that won the cup for the best horse at Bedford, and has been successful at other county shows, was by "Baron Cavendish," sire of Cam Bay Middleton. Among the younger animals Mr. Parker sent a pair of good colts, two years of age, which were placed the same at the Melton Show as they were at Market Harborough, being first and second.

The agricultural horses were not considered by the judges to be as good as usual, but there were some very useful animals. Mr. Ashby's four-year-old roan, in the rough, with foal at foot, was an excellent specimen of a farm mare, as she had large hind-quarters and great arms and thighs. Her foal was small, as might be expected, at so young an age. The prize cart fillies and geldings were excellent. On

the evening of Tuesday a challenge was made and accepted between the owner of the first prize two-year-old filly at Banbury and the first here, it being understood that both are entered for Weedon. The Banbury first is apparently more powerful, but the bay that was first last Thursday is very active, of fine quality, and in blooming condition. They are both good, and the decision will just depend on the proclivities of the judges. Mr. Hopper's first prize filly, sire Prince of the Isles, was extraordinary for size, while she is a very good-looking worker.

The sheep were nominated as long-woolled, which let in Leicesters, Lincolns, and Cotswolds. The Lincolns, however, were generally in favour, as shown by the greater number. Mr. Smith, Somerton, however, succeeded in winning more than one prize, with his splendid Cotswold, and in the shearing tups Mr. Swanwick's Cotswold took second to Mr. Wright's Lincoln. Mr. Algernon Hack, Buckminster, sent a pair of sheep, of good character, and in the two-shear Mr. Hack's ram was a good second to Mr. Howard's, which has won at several Shows this year. Mr. Smith's long-woolled lambs were extraordinary for the weight of wool they carried. In the shortwoolled the Marquis of Exeter's were very fine of character for meat. They were the produce of Southdown ewes, by Shropshire sires, most of them being of a large Down size, with black faces.

The pigs were all good. Mr. Duckering, as will be seen below, coming in for the lion's share of the prizes.

JUDGES.—**CATTLE:** C. Howard, Biddenham; J. Lynn, Straton; R. Marsh, Little Offley. **HORSES:** Lieut.-Col. Lattrell, Somerset; J. Gee, Welford; L. Foster, Irthlingborough; H. Craig, Fotheringhay, Gundle; J. Rooke, Weldon Grange, Wansford; J. Parsons, Charwelton, Daventry. **SHEEP AND PIGS:** G. Turner, Thorpeclands; R. Britten, Abington; J. Bryon, Kirby Green.

CATTLE.

FAT STOCK.

Ox, exceeding three years and three months old on the 1st of December next, and not to exceed the age of five years at the same date.—First prize, £10 and Hope's Cup, R. Wright, Lincoln; second, £5, J. Rogers, Chellington, Beds.

Steer not exceeding three years and three months old on the 1st of December next.—First prize, £10, Earl of Lonsdale, Stamford; second, £5, Earl Spencer, K.G.

Steer.—First prize, £7, R. Wright; second, £3, Earl Spencer, K.G.

Heifer, not exceeding four years old on the 1st of December next.—First prize, £7, R. Wright; second, £3, P. Phipps, Northampton.

BREEDING AND STORE STOCK.

The Barghley Park Challenge Cup, value 100 guineas, to the owner of the best Shorthorn bull, cow, or heifer.—Prize, Lord Exeter.

Bull of any age.—First prize, £10, Marquis of Exeter; second, £5, W. C. F. Mynors, Tixall, Stafford.

Bull above two years old, the property of, or hired by, the exhibitor.—First prize, £10, J. N. Beasley, Northampton; second, £5, C. W. Griffin, Peterborough.

Bull, above one and under two years of age.—First prize, £10, T. H. Bland, Market Harborough; second, £5 5s., Wm. Faulkner, Northampton.

Bull-calf, above six and under twelve months old.—First prize, £10, R. Loder, Towcester; second, £5, T. H. Bland.

Cow, in milk or in calf.—First prize, £7, Marquis of Exeter; second, £3, J. Jervis Sharp, Kettering.

Heifer, of any breed, in milk or in calf, above three and under four years old.—First prize, £7, T. Kingsley; second, £3, Marquis of Exeter.

Heifer, of any breed, in milk or in calf, above two and under three years old.—First prize, £7, C. W. Griffin; second, £3, T. H. Bland.

Heifer of any breed, above one and under two years of age.—First prize, £7, C. W. Griffin; second, £3, Marquis of Exeter.

Heifer-calf, of any breed, under twelve months old.—First

prize, £3, Duke of Buccleuch and Queensberry, K.G., Kettering; second, £3, Marquis of Exeter.

Shorthorned heifer, above one and under two years old, to have been in the exhibitor's possession six months previous to the day of show.—First prize, £10, and Hope's Cup, Captain G. A. Ashby; second, £5, J. J. Sharp.

Ox or steer (store or fat) that has been fed on food seasoned with Hope's cattle food, their silver Cup, value five guineas.—R. Wright.

Cow or heifer (store or fat) that has been fed on food seasoned with Hope's cattle food, their silver Cup, value five guineas.—Captain G. A. Ashby.

HORSES.

Stallion for agricultural purposes.—First prize, £15, T. Stokes, Caldecott, Rockingham; second, £5, J. Jelley, Great Marrowden.

Stallion for agricultural purposes.—Prize, piece of plate, value £10, J. Jelley.

Mare and foal, for hunting purposes, the foal to have been got by a thoroughbred stallion.—First prize, £15, Marquis of Exeter; second, £5, J. Richardson, Gaultby, Leicester.

Mare or gelding, adapted for hunting purposes.—First prize, £15, and second £5, W. Whitehead, Wollaston.

Mare or gelding.—First prize, £15, J. T. Pawlett, Rugby; second, £5, E. K. Fisher.

Mare or gelding.—First prize, £15, Mrs. M. A. and W. George, Gayton; second, £5, S. Stokes, Duddington.

Mare or gelding.—First prize, £10, W. Whitehead; second, £5, T. Manning, Northampton.

Mare or gelding.—First prize, £10, A. R. Adcock, Ecton; second, £5, Captain J. W. Baillie, Leicester.

Gelding or filly.—First prize, £7, G. H. Parker, Ashley Folwell, Melton Mowbray; second, £3, G. H. Parker.

Gelding or filly.—First prize, £7, Earl of Cargill, Warrington, Ormsley; second, £3, T. Rowlett, Jan., Market Harborough.

Hackney, mare or gelding.—First prize, £7, C. H. Franklin, Towcester; second, £3, J. N. Beasley, Northampton.

Cob, mare or gelding.—First prize, £7, F. M. Trench, Northampton; second, £3, O. E. Part, Derby.

Pony, mare or gelding.—First prize, £3, H. J. Hopkins, Moulton Grange; second, £3, S. Nunnely, Market Harborough.

Cart mare, with foal at foot.—First prize, £10, J. Ashby, Muroott, Rugby; second, £5, J. Gilbert, Sibbertoft, Rugby.

Cart gelding.—First prize, £3, J. Glover, Willows, Easton; second, £3, J. Walker, Newnham, Daventry.

Cart filly.—First prize, £7, R. Singleton, Preston Desney; second, £3, F. J. Berry, Stanion.

Cart gelding.—First prize, £7, R. Timma, Braamkro; second, £3, F. J. Berry.

Cart gelding.—First prize, £7, R. Hopper, Whittlesea; second, £3, R. Frew, Sharbrook.

SHEEP.

Ten long-woolled ewes, that have suckled lambs to the 1st June, 1877.—First prize, £7 7s., T. W. D. Harris, Northampton; second, £3 3s., T. Holford, Market Harborough.

Five long-woolled ewes.—First prize, £5, T. Cross, Jan., Stamford; second, £3 3s., S. Smith, Duddington, Oxon.

Five short-woolled or cross-bred ewes, that have suckled lambs to the 1st June, 1877.—First prize, £5, Marquis of Exeter.

Three short-woolled or cross-bred shear hogs.—First prize, £5, T. Holford; second, £3 10s., Sir W. de Capel Brooke, Bart.

Three long-woolled shear hogs.—First prize, £5, S. Smith; second, £3 10s., J. Hopkins, Moulton Grange Farm, Northamptonshire.

Shearling long-woolled tup.—First prize, £7, R. Wright; second, £3, R. Swanwick, Cirencester.

Long-woolled tup, two-shear and upwards, that has proved himself a stock-gutter.—First prize, £7; second, £3, A. Hack, Grantham.

Shearling Down tup, of any distinct breed.—First prize, £5, C. Barga, Weedon; second, £3, R. Phipps, Northampton.

Five long-woolled wether lambs.—First prize, £5, S. Smith, Somerton, Duddington, Oxford; second, £1 10s., Marquis of Exeter.

Five long-woolled ewe lambs.—First prize, £3, T. Close, jun.; second, £1 10s, J. Gillett, Oaklands, Charlbury, Oxon.

Five short-woolled or cross-bred wether lambs.—First prize, £3, Marquis of Exeter; second, £1 10s, C. W. Gray, Courtenhall Grange, Northampton.

Five short-woolled or cross-bred lambs.—First prize, £3, C. W. Gray; second, £1 10s, T. Holford.

PIGS.

Boar of the large breed.—Prize £3, R. E. Duckering and Sons, Kirtou Lindsey.

Boar of the small breed.—First prize, £3, R. E. Duckering and Sons; second, £3, S. Spencer, Holywell, St. Ives.

Breeding or suckling sow of the large breed.—Prize £3, R. E. Duckering and Sons. One entry.

Breeding or suckling sow of a small breed.—First prize, £3, R. E. Duckering and Sons; second, £3, Lieut.-Col. T. Arthur, Desborough.

Three fat pigs of one litter.—First prize, £3, R. E. Duckering and Sons; second, £2, G. Stratton, Husbands Bosworth.

Five breeding pigs of one litter, exceeding three and not exceeding six months old.—First prize, £3, S. Spencer; second, £1, J. B. Hanbury, Northampton.

The following Medals were awarded according to the conditions named:—

Mobbs, Snow, and Wood, Northampton, for their general collection of agricultural implements, machinery, &c. Mobbs, Snow, and Wood, for Hornsby's new patent five-arm controllable rake reaper, with large wrought iron road wheel, with various improvements. W. Ball, Northampton, for broad share. W. Ball, for general collection of ploughs, carts, wagons, implements, &c. Val. Thomas and Val. Barford, Northampton, for general collection of implements, portable boilers, drills, &c. Barford and Perkins, Peterborough, for general collection of agricultural machinery, &c. Barford and Perkins, for self-lifting and self-acting steam cultivators. Ransomes, Sims, and Head, Ipswich, for improvements in Manchester prize patent "Star" horse rakes. Marshall, Sons, and Co., Gainsborough, for patent self-feeder for thrashing machine, with safety guard attached. Hayes and Son, Peterborough, and Stamford, for general collection of R.A.S.E. prize agricultural carts, waggons, and market carts.

NORTH SHROPSHIRE.

This Society held its annual exhibition of horses, cattle, sheep, pigs, poultry, implements, &c., on September 11, at Market Drayton, on the grounds of Mr. Harcourt Griffin, Pell Wall, situate about five minutes' walk from the town. Most unfortunately the weather was of the most wretched description, heavy rain falling almost continuously from ten o'clock until five, when the Show was closed. In a pecuniary point of view therefore the Show was a failure, and this is much to be regretted as the committee had spared no efforts to make it a success. Up to two o'clock, when the admission was 2s., there could not at any time have been 500 persons on the ground, and as after that hour the rain came down literally in torrents the numbers were not very perceptibly increased. Taken in its entirety, the Show was a good one, although in several of the classes the entries were meagre, notably in the class for pairs of agricultural horses, agricultural colts, foaled in 1876, agricultural horses, open to all comers, colts suitable for a hunter or hack, foaled 1875, bull, calved 1875 (one entry only, and that not of sufficient merit to be entitled to a first prize), pair of heifers calved 1875, bull of any age, other breeds (two entries), cow of any age having produced a calf in 1877, three entries heifer, calved 1875, three entries, pair of heifers, calved, 1876, one entry. As there were only two entries for a pen of 20 ewes of any age, the second prize of £5 was not given, and in the sheep, extra stock (open to all comers), the second prize, silver medal, was not awarded. There is nothing particularly special to note about the horses, but the mares with foal came in for the greatest notice. Mr. Bourne, of the Arbour Farm, Market Dray-

ton, easily won the first of £4 for pair of heifers calved 1875, and we have not seen better for some time. In the pair of cows for dairy purposes, any breed, Mr. Thomas Burgess, of Burleydam, Whitchurch, gained the first prize with two splendid animals. The sheep were above the average in quality, but the entries were far from numerous, and the same remark will also apply to the pigs. There were exhibits of four cheeses exceeding 50lbs. in weight, and nine not exceeding 50lbs., and most of these were of prime quality. The exhibits for butter numbered twelve, and the judges awarded the first prize of £2 to Mr. Waine, of The Bowney, Market Drayton. The wool calls for no special notice. As usual, the display of implements formed a great feature of the Show. Gold medals were awarded to Messrs. A. W. Gower and Son, Market Drayton, Messrs. R. T. Smith and Co., Whitchurch, Messrs. S. Corbett and Son, Wellington, and Messrs. John Rodenhurst and Co., Limited, Market Drayton, for general collection; also a silver medal to Messrs. R. T. Haynes and Co., Wellington and Much Wenlock, for Hornby's new patent spring-balance self-raking reaper, with controllable rakers, to Mr. W. S. Underhill, of St. Mary's Works Newport, for 2-horse power vertical steam engine, and to Messrs. Corbett and Peele, of the Perseverance Iron Works, Shrewsbury, for general collection of implements.

The "highly commended" included Messrs. Gower and Son's Whittingham's patent millstone dressing machine, and a locomotive waggon for agricultural and other purposes; Stacy and Son, Newport, for agricultural waggons; Mr. A. Walker, Shrewsbury, for a 3-horse-power vertical machine and boiler combined; Mr. J. Robinson, of Whitchurch, for milk vats, cheese tubs, churns, Cheddar vats, cheese vats, &c.; Mr. J. Rodenhurst, of Market Drayton, for fire ranges; Messrs. S. Corbett and Son for an improved champion prize barrel root-pulper, and new patent "Challenge the World" combined potato raising plough; Messrs. R. T. Smith and Co., of Whitchurch, for cattle, pig, and sheep hurdles, hurdles for deer, park fence, galvanised wire fence, &c.

PRIZE LIST.

HORSES.

AGRICULTURAL.

Agricultural stallions, best suited to travel the district, in the season of 1878.—First prize, J. Busby, Billington; second, J. Harvey, Stone.

Mares with foal, for agricultural purposes.—First prize, G. Bowen, Salop; second, A. Darby, Shrewsbury.

Pair of horses for agricultural purposes.—First prize, J. Bourne, Market Drayton; second, E. B. Steedman.

Horses for agricultural purposes.—First prize, S. Winnall, Newport, Salop; second, Sarah Corfield, Cheshire.

Colt for agricultural purposes, foaled 1876.—First prize, W. Rider, Wellington, Salop; second, T. Bourne, Eccleshall.

Colt for agricultural purposes, foaled 1875.—First prize, A. Darby, Shrewsbury; second, T. Burgess, Whitchurch, Salop.

Colt for agricultural purposes, foaled 1876.—First and second, prizes, J. Harvey.

EXTRA STOCK.—AGRICULTURAL HORSES.

(Open to all comers.)

Prize, S. Bourne, Whitchurch, Salop; no second prize; not sufficient merit.

HUNTING AND HACKNEY HORSES.

Mare, with foal, for hunting purposes.—First prize, J. Gouldbourne, jun., Whitchurch, Salop; second, F. Earl, Shifnal, Salop.

SPECIAL ADDITIONAL CLASS.

Hunter, four years old and upwards, bona fide the property of a Member of the Society since March, 1877.—First prize, S. Hudson, Wytheford, Shawbury; second, R. S. Wilkinson, Newcastle-under-Lyme.

Hack or roadster, 15 hands or over.—First prize, The Hon. E. H. Pierrepont, Market Drayton; second, E. W. Harding, Market Drayton.

Cob, hack, or roadster, under 15 hands.—First and second prize, R. Wyatt, Stafford.

Colt, suitable for a hunter or hack, foaled 1874.—First prize, T. Dicken, Wellington; second, R. K. Mainwaring, Market Drayton.

Colt, suitable for a hunter or hack, foaled 1875.—First prize, F. Earl; second, R. Bourne, Market Drayton.

Pony, not exceeding 13 hands.—First prize, G. Wayne, Market Drayton; second, R. Eardley, Audlem, Cheshire.

EXTRA STOCK.—HUNTING AND HACK HORSES.

(Open to all comers.)

First prize, F. Earl; second, Mrs. S. Aokers, Market Drayton.

CATTLE.

SHORTHORNS.

Bull of any age (but age to be taken into consideration), by the president.—First prize, T. Nash, Featherstone, Wolverhampton; second, R. Eardley, Audlem, Cheshire.

Bull, calved 1875.—Prize, P. Buchanan, Market Drayton.

Bull, calved 1876.—First prize, T. Burgess, Whitechurch, Salop; second, H. Ward, Market Drayton.

Cow of any age (but age to be taken into consideration) having produced a calf in 1877.—First prize, P. H. Chesters, Nantwich; second, G. T. Phillips, Newport, Salop.

Pair of heifers, calved 1875.—First prize, J. Bourne, Market Drayton; second, R. Cooke, Market Drayton.

Heifer, calved 1875.—First prize, P. H. Chesters, Nantwich; second, A. Taylor, Newport, Salop.

Pair of heifers, calved 1876.—First prize, Rev. W. Sneyd, Newcastle, Staffordshire; second, G. T. Phillips, Newport, Salop.

OTHER BREEDS, NOT SHORTHORNS.

Bull, any age (but age to be taken into consideration).—Prize, J. Hill, Church Stretton.

Cow, of any age (but age to be taken into consideration), having produced a calf in 1877.—First and second prizes, J. Hill, Church Stretton.

Heifer, calved 1875.—First prize, J. Hill; second, R. Cooke, Market Drayton.

Pair of heifers, calved 1876.—Prize, J. Hill.

ANY BREED.

Pair of cows, for dairy purposes, each having produced a calf in 1877.—First prize, T. Burgess, Whitechurch, Salop; second, F. L. Lightfoot, Market Drayton.

Cow, for dairy purposes, having produced a calf in 1877.—First prize, T. Burgess, Whitechurch, Salop; second, Bourne, Whitechurch, Salop.

EXTRA STOCK.—CATTLE.

(Open to all comers.)

First-class medal of the Society and a silver medal.—First prize, Rev. W. Sneyd, Newcastle, Staffordshire; second, G. T. Phillips, Newport, Salop.

SHEEP.

SHROPSHIRE OR OTHER SHORT WOOLLED.

Ram of any age (but age to be taken into consideration).—Prize, T. Nock, Shifnal, Salop.

Ram, lambd 1876.—Prize, T. Nock; second, M. H. Griffin.

Ram, lambd 1876, the property of a bona-fide tenant farmer, who has not been an exhibitor at any Show of the Royal Agricultural Society.—First prize, B. Goodall, Market Drayton; second, R. Cordon Pooler, Newport, Salop.

Ram lamb, lambd in 1877.—First prize, T. Nock; second, M. H. Griffin.

Pen of five ram lambs, lambd in 1877, the property of a bona-fide tenant farmer, who has not been an exhibitor at any Show of the Royal Agricultural Society.—First prize, W. Picken, Newport, Salop; second, W. H. Goodall, Market Drayton.

Pen of twenty ewes, of any age, each having produced a lamb in 1877.—Prize, M. H. Griffin.

Pen of ten ewes, of any age, each having produced a lamb in 1877, the property of a bona-fide tenant farmer who has not been an exhibitor at any Show of the Royal Agricultural Society.—First prize, B. Goodall; second, R. Jones, Newport, Salop.

Pen of five ewes, of any age, each having produced a lamb in 1877.—First prize, T. Nock; second, C. C. Cotes, M.P., Newport, Salop.

Pen of five ewes, lambd in 1876.—First prize, M. H. Griffin; second, T. Nock.

Pen of five ewes, lambd in 1876, the property of a bona-fide tenant farmer, who has not been an exhibitor at any Show of the Royal Agricultural Society.—First prize, W. Fowler; second, W. Picken.

EXTRA STOCK.

SHEEP.

(Open to all comers.)

First prize, H. M. Griffin; second, medal withheld—nothing of sufficient merit shown.

PIGS.

LARGE AND MIDDLE BREED.

Boar of any age.—First prize, G. Bradford, Hanley, Staffordshire; second, J. H. Kemp, Market Drayton.

Breeding sow, in pig, or with farrow of sucking pig.—First prize, J. H. Kemp; second, T. Burgess, Whitechurch, Salop.

SMALL BREED.

Boar of any age.—First prize, R. K. Mainwaring, Market Drayton; second, W. Godwin, jun., Market Drayton.

Breeding sow, in pig, or with farrow of sucking pig.—First prize, T. Radcliffe; second, R. K. Mainwaring.

ANY BREED.

Pen of pigs of the same farrow, above four and under eight months old.—First prize, C. Mort; second, W. Godwin, jun.

EXTRA STOCK.

PIGS.

(Open to all comers.)

Prize, F. Godwin, Market Drayton.

CHEESE.

Sample of four cheeses, each exceeding 50lbs. in weight.—First prize, J. H. Kemp; second, E. Mamey, Market Drayton.

Sample of four cheeses, each not exceeding 50lbs. in weight.—First prize, C. Mort; second, J. Goodall, Whitechurch.

BUTTER.

Batter, not less than 4lbs.—First prize, C. D. Hudson, Cheswardine Hall; second, W. H. F. Nock, Burlington, Newport.

WOOL.

Five fleeces of Shropshire wool.—First prize, J. Fowler, Foxley, Wem; second, W. Fowler, Shrewsbury.—Advised from *The Country Advertiser*.

WARWICKSHIRE.

MEETING AT ALCESTER.

The weather on Sept. 11, was the worst for the opening of a show that we ever experienced, for it began to rain hard soon after 9 o'clock, and the only change till past 4 o'clock was a regular stormy downpour at intervals. This, no doubt, was a great loss to the finances of the Society, for nearly all the visitors present were members of the Society who had free admission. The Alcester Local Committee, however, had exerted themselves greatly, and collected upwards of £500 in the interest of the county meeting in their little town of something less than 3,000 inhabitants. Of this, we were informed, £400 was presented to the Society for offering as prizes, and the remainder was spent in preliminary expenses and ornamenting the town. But the general topic of conversation during the day—and there was a plenty of opportunity for a general chat, as the members of the Society were sheltering in small parties nearly all day—was the self-evident want of renewed energy in the management of the Warwickshire Society. Nearly all the classes were very meanly filled, which it was clear was more due to want of management on the part of the authorities than to the avowed resources at their command. According to an "inspired" report in a Birmingham "daily," the finance committee had £900 at their disposal, which, with the £400 above mentioned, would make £1,300 for distribution in prizes; but by calculating the amount actually awarded, including small prizes for cheese, butter, roots,

grain, and implements, the amount given was less than £600. This small sum for a county show, together with the want of energy, courtesy, and buoyancy which prevails among the officials and authorities, sufficiently accounts for the meanness of the show in general.

The Shorthorns were only a very middling collection. For the best bull above three years of age only £10 were offered. This went to Telemachus 6th. Mr. Bland's General Fuzee was the reserve number, and Mr. Ackers' Clovis, Mr. Garne's Prince Pack, and Mr. Harris' Waterloo Prince were commended. In the next class Mr. Bland was first with General Flirt, Baines's Windsor being second. This was a very middling class. In the class for animals over ten and under twenty months Mr. Stratton's bull, oddly named Carbuncle, came in first, and Mr. Garne's Thorndale Geneva second. The females were a mean lot as a whole. Telemachus, the first, was the only one worth looking at among the cows. In the heifers Mr. Bland's very handsome Brazilian Bride was first, but she wants substance to make her a rent-paying specimen of a Shorthorn. In the yearling heifers Mr. Ashby's Innocence again attained the first position, while the second was Mr. Ackers' beautiful young heifer, 3rd Lady Carew. Mr. Stratton's Wildflower, a very showy roan of fashionable parts, was not noticed by the judges, which, to say the least of it, is singular. The Longhorns were only seven, and this number presented all the eccentric conformation of body and horn which this breed displays. The exhibitors' names will be found in our prize list. The £3 offered for the best bull of any breed was won by Telemachus 9th, the only other one in competition being a very middling Hereford bull. Some very useful dairy cows were shown in pairs, but they were all eclipsed by Mr. Stratton's Fairy Queen by Reflector (2725), and Hanwern 2nd by Orontes (24695). These were grand cows, both as beef producers and for milking capacities. The tenant farmers' milking cows, particularly those shown by Mrs. Brown, were first-class animals.

The sheep were a poor lot as a whole. Mr. Turner, jun., Thorpelands, Northampton, sent four lots from his flock, and he was fairly awarded all the prizes for Leicesters, although he had no competitors. The Cotswolds which were sent by Mr. Gillett were as good as he usually exhibits, but Mr. Raybird's yearling ram was a very mean brute. The awards will be found below. The Shropshires were not many, although they are the general stock of Warwickshire. Mr. Lytball's first yearling was not much to boast of, and Mr. Randall's commanded less notice. There were two in the two-shears, and Mr. Pilgrim rejoiced as the winner of both the prizes. Lord Leigh was surprised at being first and second in ewes, while Lord Ernest Seymour sent some useful ewes fresh from grass, their wool being of its natural colour and condition. Of the "other shortwooled sheep" there was only one pen of five shearing ewes. The other classes were of no public importance.

The agricultural horses were worth looking at in many instances. In the stallions Mr. Russell's Bonny Tom is a splendid little farmer's horse for strength and activity in a small compass; while Mr. Wynn's second, a black, and third, a brown, are excellent stock animals. The mares with a foal at foot were as good a class of farm horses as we have seen for some time. There were some capital foals at the same time, among which was Mr. Tipping's, of Inkberrow. The geldings and fillies were good, but generally of an ordinary type and character. In the geldings above four years of age Mr. Humphrey's grey, six years old, that was first at Banbury last week, was again the favourite; and in the mares above four years of age Mr. Wynn's dapple grey was first. This pair of greys were together at Banbury in a mixed class, and the mare was placed first and the horse second; but

some spectators said the grey horse in this instance was the better animal, in which we agree. The principal hunters were dealers' horses, as neither landlords nor farmers appear to be disposed to exhibit at their county meeting. Mr. Ford as one winner, and Mr. Franklin as the other, are dealers at Leamington, and they exhibited the same horses as were noticed the week before at Banbury. The former made a wrong entry with Golden Drop, and was disqualified, but Golden Drop won in the open class. Mr. Franklin's first, by Camerino, dam by Dagobert, is a very powerful and handsome bay mare, with fine paces. The cobs, hacks, and ponies were only of local interest.

The pigs were a small but good show. Mr. Godfrey's white sow and ten evenly-matched suckling pigs attracted much attention: so did Mr. Tommas's white sow with eight sucklers all alike. The Berkshires, however, carried off the greater admiration by practical men, which they merited.

PRIZE LIST.

JUDGES.—CATTLE: T. Morris, Maisemore Court, Gloucester; E. Wortley, Ridlington, Uppingham. SHEEP and PIGS: T. Inston, Calloughton, Much Wenlock; J. Treadwell, Upper Winchendon, Aylesbury. AGRICULTURAL HORSES: H. Lowe, Comberford, Tamworth; W. Baker, Moor Barns, Atherstone. HUNTING HORSES, HACKS, PONIES, &c.: J. B. Watts, Malcombe Horsey, Dorchester; J. M. K. Elliott, Greens Norton Hall, Towcester. IMPLEMENTS: R. H. Masford, Pondeford.

CATTLE.

SHORTHORNS.

Bull, over three years old.—Prize, The Marquis of Exeter, Burghley Park, Stamford (Telemachus 6th).

Bull, over twenty months and under three years old.—First prize, T. H. Bland, Market Harborough (General Flirt); second, J. Elwell, Castle Bromwich (Baines's Windsor).

Bull, over ten and under twenty months old.—First prize, R. Stratton, Newport (Carbuncle); second, G. Garne, Churchill Heath (Thorndale Geneva).

Cow in-milk, above three years old.—First prize, The Marquis of Exeter (Telemachus); second, T. Harris, Redditch (Mennie).

Heifer, under three years old, in-milk or in-calf.—First prize, T. M. Bland, Market Harborough; second, T. Harris, Stoney Lane House.

Heifer, under two years old.—First prize, G. A. Ashby, Naseby Wollays, Northamptonshire; second, B. St. John Ackers.

LONGHORNS.

Bull.—Prize, R. Hall, Burton-on-Trent.

Cow or heifer in-milk.—First prize, W. G. Farmer, Hinckley; second, S. Forest, Kenilworth Chase.

Bull for breeding purposes, of any breed.—Prize, The Marquis of Exeter (Telemachus 9th—Shorthorn).

DAIRY CATTLE.

Pair of cows in-milk.—First prize, R. Stratton, Newport; second, C. Corbett, Broad Marston.

Pair of dairy cows in-milk, the property of tenant-farmers in the Alcester Poor-law Union district.—First and second prizes, Mrs. Brown, Beauchamp Court, Alcester.

Extra prize of £10 for best beast in all the classes, the property of a Warwickshire tenant-farmer.—C. Corbett, Broad Marston.

SHEEP.

LEICESTERS.

Shearling ram.—First and second prizes, G. Turner, jun., Northampton.

Two-shear ram.—Prize, G. Turner, jun.

Fen of five shearling ewes.—Prize, G. Turner, jun.

COTSWOLDS.

Shearling ram.—First and second prizes, J. Gillett, Charlbury.

Two-shear ram.—Prize, W. Wheeler, Long Compton, Shipston.

Five shearling ewes.—First prize, J. Gillett; second, H. E. Raybird.

OTHER LONG-WOOLLED SHEEP.

Shearling ram.—Prize, W. Wheeler, Long Compton.
Five shearling ewes.—No entry.

SHROPSHIRE.

Shearling ram.—First and extra prizes, E. Lythall, Radford Hall; second, C. Randall, Evelham.
Two-shear rams.—First and second prizes, S. C. Pilgrim, Hincley.
Pen of five shearling ewes.—First prize, S. C. Pilgrim; second, Lord Leigh.

OTHER SHORT-WOOLLED SHEEP.

Shearling ram.—No entry.
Pen of five shearling ewes.—Prize, J. Lane, Alcester.

PIGS.

Boar, large breed (except Berkshire), under eighteen months old.—Prize, R. Tommas, Birmingham.
Boar, large breed (except Berkshire), above eighteen months old.—First prize, W. Wheeler, Shipston; second, R. Tommas.
Boar, small breed, under eighteen months old.—First prize, R. Tommas; second, W. Wheeler.
Boar, small breed, above eighteen months old.—First prize, W. Wheeler; second, R. Tommas.
Boar, Berkshire breed, under eighteen months old.—Prize, H. Humphrey, Shriwenham.
Boar, Berkshire breed, above eighteen months old.—First prize, H. Humphrey; second, B. St. John Ackers.
Breeding sow suckling pigs, large breed (except Berkshire).—First prize, J. Godfrey, Hincley; second, R. Tommas.
Breeding sow, small breed.—Prize, W. Wheeler.
Berkshire sow.—First prize, B. St. John Ackers; second, R. Tommas.
Three breeding pigs of one farrow of 1877, large breed.—Prize, R. Tommas.
Three breeding pigs of one farrow of 1877, small breed.—Prize, W. Wheeler.
Three breeding pigs of one farrow of 1877 (Berkshires).—Prize, B. St. John Ackers.
Breeding sow suckling pigs (large breed), the property of any person residing in Alcester Union district.—Prize, J. Canning, Alcester.
Sow of any breed.—No entry.

HORSES.

AGRICULTURAL.

Stallion which has been used in the county in 1877.—First prize, T. Russell, Daventry (Bonny Tom); second, W. Wynn, Stratford-on-Avon (Aoe of Trumpa); third, W. Wynn (Chimney Sweeper).
Mare with foal.—First prize, W. Butler, Warwick; second, H. B. Bomford, Exhall Court.
Gelding under three years old.—Prize, H. J. Bomford, Alcester.
Filly under three years old.—Prize, Lord Ernest Seymour, Kingley, Alcester.
Gelding under four years old.—Prize, J. Garner, Tachbrook Hill.
Filly under four years old.—Prize, J. Prosser, Broadway.
Cart gelding.—Prize, E. Humphries, Pershore.
Cart mare.—Prize, W. Wynn, Stratford-on-Avon.
Pair of agricultural draught horses, the property of a tenant-farmer.—Local committee's prize, J. W. Wall, Exhall Court.
HUNTERS.
Stallion best adapted for hunting purposes, used in the county in 1877.—Prize, W. Goodwin, Byfield (Castilian).
Hunter that has been ridden in the past season with the Warwickshire, North Warwickshire, Atherstone, Pytchley, Bicester, Quorn, Lord Coventry's, Heythorpe, North Cotswold, or Worcestershire Hounds.—Prize, W. E. Franklin, Leamington (bay mare by Cameron).
Hunter, four years old and upwards.—First prize, H. Ford, Leamington (Marquis); second, T. H. Hardman, Stratford-on-Avon.
Four-year-old gelding or filly, adapted for hunting purposes, the property of a Warwickshire tenant-farmer.—First prize, J. Gibbs, Wootton Waven; second, W. P. Silvester, Alcester.
Hunter which has been hunted during the last season with either the Warwickshire or North Warwickshire Hounds, the property of a tenant farmer.—Prize, C. Corbett, Broad Marston.

Half-bred two-year-old colt or filly, the property of a member.—Prize, C. M. Hamer, Snitterfield.

HACKNEYS AND PONIES.

Hackney, exceeding fifteen hands high.—Prize, Miss Moffatt, South Kenington (Charley).
Hackney, not exceeding fifteen hands high.—Prize, Miss Moffatt (Belia).
Pony, above thirteen and not exceeding fourteen hands high.—Prize, W. W. Neale, Coventry.
Pony, above twelve and not exceeding thirteen hands high.—Prize, E. P. Turner.

WOLSKINGHAM.

On Sept. 11 the annual exhibition of stock in connection with the Wolsingham and Wear Valley Agricultural Society, took place in a field on the south of the village. The entries consisted of bulls of different ages, 19; cows and heifers, 32; Leicester sheep, 30; moor sheep, 23; pigs, 14; saddle and harness horses, 23; do. driving class, 14; draught horses, 31; ponies, 34; leapers, 10; dogs, 129; poultry, 231; pigeons, 13; rabbits, 30; butter, 23; eggs, 10; and shooting smiths, 8—making a total of 686, being considerably over last year's entry. The show was a good one, all classes being represented.

WATERFORD.

The annual show of this Society was held on Sept. 13, in the Court-house grounds, Waterford. The entries were numerous, and the exhibition proved successful.

PRIZE LIST.

CHALLENGE CUPS FOR OPEN COMPETITION.

The Cooke Challenge Cup, value £20, for the best heifer calf of the Shorthorned breed, bred by exhibitor, calved on or after the 1st of January, 1877.—Prize, F. G. Kent, Island View, Dunmore East (Lily).
The Paul Challenge Cup (a pair), value £50, for the best colt or filly three or four years of age.—First prize, the Marquis of Waterford; second, F. Badd, Sweetbrier, Tranore (Actress).
The Exhibition Challenge Cup, value £50, for the best two yearling heifers of the Shorthorned breed.—Prize, H. Smith, Mountmellick, Queen's County (Britannia 11th).
(Prizes confined to members of the Society.)

CATTLE.

GENTLEMEN'S CLASS.

Yearling bull.—First prize, E. Doran, Jerpoint House, Thomastown (Fair King); second, Sir R. J. Paul, Bart., Ballyglen, Waterford.
Bull, two years old and upwards, and for the service of which not more than 10s. shall be charged to 15 cows.—Prize, Mrs. V. Stuart, Castletown, Carrick-on-Suir (Lord of the Soil).
Bull calf.—First prize, Sir R. J. Paul, Bart., Ballyglen, Waterford (Trooper); second, same (Trumpet).
Cow in calf or milk.—First prize, Mrs. V. Stuart (Miss Patrick IV.); second, B. Banbury, Glenville, Waterford (Lady Juvena).
Two-year-old heifer in calf.—First prize, Sir R. J. Paul, Bart. (Satchel); second, J. J. Jones, Mullinahore, Waterford (Magic).
Heifer calf.—First prize, F. G. Kent, Island View, Dunmore East (Lily); second, same (Daphne).

BOTH FARMERS' CLASSES.

Bull under five years of age, in the opinion of the judges a thorough-bred animal.—First prize, F. G. Kent, Island View, Dunmore East (Lord of the Isles); second, D. Murphy, Blossom Hill, Kilmacow (Bismarck).

FARMERS' FIRST CLASS.

(Open to tenant farmers whose holdings are valued by the tenement valuation over £100 per annum.)
Cow in calf or milk.—First prize, D. Murphy; second, T. Cleary, Prospect, Farrybank.
Three-year-old heifer in calf or milk.—First prize, F. G. Kent (Dowdrop); second, D. Murphy.
Two-year-old.—Prize, T. Barry, Waterford.
Yearling heifer.—First prize, D. Murphy, Blossom Hill, Waterford; second, F. G. Kent, Island View, Dunmore East (Elizabeth 6th).

Heifer calf.—First prize, M. Hurley, Kilbarry, Waterford; second, F. G. Keat (Elizabeth 8th).

FARMERS' SECOND CLASS.

(Open to working farmers living principally by husbandry, whose holdings are valued by the tenement valuation under £100 per annum.)

Cow in calf or in milk.—First prize, M. Maddock, Grassden, Waterford; second, J. Curtin, Ballymaelode, Waterford.

Three-year-old heifer in calf or milk.—Prize, D. Murphy.

Two-year-old heifer.—First prize, P. Lyons, Williamstown, Waterford; second, T. Jordau, Ballynaneaha, Waterford.

Yearling heifer.—Prize, D. Murphy.

SHEEP—GENTLEMEN'S CLASSES.

Ram.—First prize, S. Mowbray, Killeany, Mountzath; second, same.

Five breeding ewes.—First prize, Mrs. V. Stuart, Castlelows, Carrick on-Suir; second, M. Barron, Ballyrobin, Waterford.

SHEEP—BOTH FARMERS' CLASSES.

Ram.—First prize, M. Barron.

Three breeding ewes.—First prize, M. Hurley, Kilbarry, Waterford; second, M. Shanahan, Castletown, Waterford.

Five ewe lambs.—Prize, M. Barron.

SWINE—GENTLEMEN'S CLASSES.

Boar between six and twenty-four months' old.—Prize, J. Budd, Sweetbriar, Tramore.

Sow and litter of not less than six pigs, not more than four months old, First prize, J. Budd; second, M. Shanahan.

Breeding sow in pig.—Prize, J. Budd.

Boar of the Yorkshire breed.—Prize, J. Budd, Sweetbriar.

SWINE—BOTH FARMERS' CLASSES.

Boar between six and twenty-four months' old.—Prize, J. Gasey, Danhill, Waterford.

Sow and litter of pigs not more than four months' old.—Prize, M. Shanahan.

Breeding sow in pig.—Prize, M. Shanahan.

HORSES.

(Open to all classes).

Hunter, either horse or mare, five or more years of age.—First prize, the Marquis of Waterford; (The Clown); second, T. W. Anderson, Prospect, Waterford.

Thoroughbred stallion, suited for general purposes.—No merit.

Brood mare, suited for general purposes, in foal or with a foal at foot.—First prize, T. Cleary, Prospect, Waterford; second, P. Gower, Kilbride, Waterford.

BOTH FARMERS' CLASSES.

Brood mare, suited for general purposes, in foal or with foal at foot.—First prize, W. McGuire, Woodstown, Waterford; second, T. Cleary.

THE GADDESBY HALL SHORTHORN SALE.

Industrial depression and commercial stagnation, European wars and Indian famine, a wet season and an indifferent harvest do not materially affect the value of the highest class of Shorthorns. Three weeks ago two smart young Duchesses heifers from Mr. Cockrane's celebrated American herd were sold in Cumberland for upwards of four thousand guineas each, and last week, in Leicestershire and Northamptonshire, fully half these large amounts have been realised for matronly Duchesses considerably past their prime.

It is a dozen years since Mr. Cheney began breeding Shorthorns. Not satisfied with the pick of British herds, he had repeated selections from first-class American sources of Duchesses, Oxfords, and Princesses. In July, 1873, he sold 35 head at the handsome average of £294 10s. 2d., and in September, 1874, 27 lots made £419 1s. 4d. Such substantial results help to counterbalance disappointments and losses which have recently been frequent at Gaddesby, notwithstanding Mr. Bland's careful and intelligent management. The 14th Duchess of Airdrie, safely over her calving, and catalogued for the sale three weeks ago, appeared a little out of sorts, and when receiving a stimulating drench was accidentally choked. Her bull calf, a promising youngster, who might have added a good thousand to the sale a fortnight ago drooped, showed evidence of indigestion, and died on Sunday week from obstruction of the bowels caused by a ball of hair from his own abundant mossy coat.

The goodly company assembled at Gaddesby comprised all the most notable Shorthorn breeders or their representatives; but the sale cannot be called a brisk one. Many of the lots were entered at low figures, and only crept up slowly, as Mr. Stratford decanted on their merits and value. The first two entries having been disposed of, the 13th Duchess of Airdrie entered the ring, having been substituted for the sister cow, which, as already mentioned, had been lost. She was in store condition. She is a good-looking red seven-and-a-half year old. Her recent behaviour having been unsatisfactory, a guarantee was given of her being in calf; between Lord Bective, Lord Skelmersdale, Mr. Foster, and Mr. Loder a

keen competition ensued, and she went down to the bid of the master of Whittlebury Park for 2,200 gu. The two Oxford cows next following were capital specimens of high-bred Shorthorns. Seldom does one see a more stylish symmetrical cow than 10th Maid of Oxford, of January 16, 1871, got by 4th Duke of Geneva, and with the Marquis of Carrabas cross, which some authorities aver improves both pedigree and appearance. She had calved a week, and had many admirers, but Lord Bective out-distanced the several bidders, and got her at 1,605 gu. Her bull calf of 13th September, if fortunate, will prove a good purchase to Mr. Loder, who had him for 180 gu. Thirteenth Lady of Oxford, a smart, kindly, good six-year-old, mother of two heifers, which sold for upwards of 2,000 each, and safe in calf, will prove a bargain to Mr. Henry Allcop at 1,900 gu. Foiled in his efforts to get one of the older cows, Mr. Ashburner made a good stand for Eleventh Maid of Oxford—a very promising heifer, calved February 9th, 1876, and not dear at 1,400 gu. Princesses have not recently made the advances in value which their long good descent might have justified, and the three averaged 350 gu. The three Wild Eyes scarcely reached this average. The Fidgets from Mr. Bates' Fletcher tribe, and Mr. Bowly's Musicals, were not in such favour as they have been. Breeders are not willing to give high figures for five-year-old bulls, even when as active and good as Third Duke of Gloucester, which Mr. John Lynn secured for 550 gu. There was keener competition for Seventh Duke of Gloucester—a red, heavy-fleshed, growing yearling by 9th Duke of Geneva, whose stock have been so many years the pride of Gaddesby. The bids came quick and strong from many quarters, but Mr. Drewry carried him off for the Duke of Devonshire at 1,850 gu. The Oxford bull, having gone amiss, was not offered. The 5 bulls averaged £526 7s. 8d.; the 20 cows and heifers brought £557 19s. 9d.; the total average stands at £532 13s. 8d.—being the highest Shorthorn average made this year, and the highest but two ever realised in this country.

For further remarks upon the stock sold at this important sale we must refer readers to our "Live Stock Notes."

COWS AND HEIFERS.

CLEOPATRA 12TH, white, calved April 13, 1868; by Grand Duke of Essex 4th (24068), dam Cleopatra 5th by Ninth Duke of Oxford (17738).—Rev. J. D. Jefferson, Thicket Priory, 52 gs.

FIDELITY 2ND, roan, calved January 8, 1870; by Millbrook (34851), dam Frantic 4th by Duke of Oxford (33703).—R. Botterill, Yorkshire, 71 gs.

THIRTEENTH DUCHESS OF AIRDRIE, red, calved April 13, 1870; by Tenth Duke of Thorndale (28458), dam Duchess of Airdrie 8th by Royal Oxford (18774).—Mr. Loder, Witlebury Park, 2,200 gs.

SERAPHINA 22ND, roan, calved June 2, 1870; by Royal Cumberland (27358), dam Seraphina 20th by Sixth Grand Duke (19878).—Not sold.

TENTH MAID OF OXFORD, red and white, calved January 16, 1871; by Fourth Duke of Geneva (30958), dam Third Maid of Oxford by Grand Duke of Oxford (16184).—Earl Bective, 1,605 gs.

Her bull calf.—Mr. Loder, 180 gs.

THIRTEENTH LADY OF OXFORD, roan, calved January 21, 1871; by Baron of Oxford (23371), dam Seventh Lady of Oxford by Sixth Duke of Thorndale (23794).—H. Allsop, Worcester, 1,900 gs.

WILD DUCHESS OF YORK, roan, calved February 8, 1871; by Seventh Duke of York (17754), dam Wild Oxford by Lord Oxford 2nd (30315).—Rev. J. D. Jefferson, 470 gs.

LADY WELLESLEY 2ND, roan, calved May 11, 1875; by Ninth Duke of Geneva (28391), dam Lady Wellington by Duke of Putney (33717).—L. Rastorne, Preston, 425 gs.

MUSICAL 17TH, roan, calved July 25, 1873; by Third Duke of Claro (23729), dam Musical 13th by Seventh Duke of York (17754).—J. H. Blandell, Laton, 51 gs.

FIDELITY 3RD, roan, calved May 31, 1871; by Millbrook (34851), dam Frantic 4th by Duke of Oxford (33703).—R. Botterill, Yorkshire, 70 gs.

PRINCESS ALEXANDRA 2ND, red, calved January 26, 1875; by Ninth Duke of Geneva (28391), dam Princess Alexandra by Eighth Duke of Oxford (15939).—Lord Morreton, 110 gs.

CLEOPATRA'S DUCHESS 4TH, roan, calved March 1, 1875; by Ninth Duke of Geneva (28391), dam Cleopatra 12th by Grand Duke of Essex 4th (24068).—Major Chaffey, 70 gs.

FIDGET, red and white, calved December 20, 1875; by Ninth Duke of Geneva (28391), dam Fidelity 3rd by Millbrook (34851).—J. H. Blandell, Laton, 75 gs.

LADY ANGELINA, red, calved August 2, 1876; by Ninth Duke of Geneva (28391), dam Tube Rose 44th by Saladin (35461).—Lord Bective, 415 gs.

ELEVENTH MAID OF OXFORD, red and white, calved February 9, 1876; by Ninth Duke of Geneva (28391), dam Tenth Maid of Oxford by Fourth Duke of Geneva (30958).—Mr. Ashburner, Conishead, Cumberland Priory, 1,400 gs.

WILD DUCHESS OF GENEVA 5TH, roan, calved December 14, 1876; by Ninth Duke of Geneva (28391), dam Wild Duchess of York by Seventh Duke of York (17754).—Major Chaffey, 200 gs.

MUSICAL 18TH, red, calved March 6, 1877; by Third Duke of Gloucester (33653), dam Musical 17th by Third Duke of Claro (23729).—E. Bowly, Cirencester, 40 gs.

LADY ANGELINA 2ND, red and white, calved March 12, 1877; by Third Duke of Gloucester (33653), dam Tube Rose 43rd by Saladin (35461).—T. Holford, Market Harborough, 230 gs.

FIDGET 2ND, roan, calved March 23, 1877; by Third Duke of Gloucester (33653), dam Fidelity 3rd by Millbrook (34851).—D. R. Green, Colechester, 83 gs.

WILD DUCHESS OF GLOSTER, roan, calved April 20, 1877; by Third Duke of Gloucester (33653), dam Wild Oxford by Lord Oxford 2nd (20215).—Sir W. Salt, Loughborough, 340 gs.

SERAPHINA'S DUCHESS 3RD, roan, calved June 16, 1877; by Third Duke of Gloucester (33653), dam Seraphina 22nd by Royal Cumberland (27358).—Major Chaffey, 40 gs.

BULLS.

THIRD DUKE OF GLOSTER (33653), red, calved December 1, 1872; by Tenth Duke of Thorndale (28458), dam Duchess of Airdrie 8th by Royal Oxford (18774).—John Lynn, Lincolnshire, 550 gs.

SEVENTH DUKE OF GLOSTER, red, calved June 8, 1876; by Ninth Duke of Geneva (28391), dam Duchess of Airdrie 14th by Tenth Duke of Thorndale (28458).—Duke of Devonshire, Holker, 1,860 gs.

LORD OXFORD, roan, calved September 18, 1876; by Ninth Duke of Geneva (28391), dam Thirteenth Lady of Oxford by Baron of Oxford (23371).—Withdrawn.

LORD WILD EYES, roan, calved May 18, 1876; by Ninth Duke of Geneva (28391), dam Wild Eyes 30th by Seventh Duke of York (17754).—Sir Joseph Whitworth, 110 gs.

EARL OF LEICESTER 15TH, red, calved March 19, 1877; by Third Duke of Gloucester (33653), dam Tube Rose 42nd by Eleventh Duke of Thorndale (31024).—H. H. Langham, Northampton, 73 gs.

EARL OF LEICESTER 16TH, roan, calved April 4, 1877; by Third Duke of Gloucester (33653), dam Lady Susan 3rd by Ninth Duke of Thorndale (31023).—J. Banks, Stanhope, 75 gs.

SUMMARY.

	£	s.	d.	£	s.	d.
30 cows and heifers averaged	528	7	3½	10,527	6	0
5 bulls	557	19	5	2,789	17	9
25 head	582	13	8½	13,317	3	0

THE SHOLEBROKE LODGE SALE.

On Sept. 19th, some of Mr. R. E. Oliver's noted Sholebroke herd, together with 27 animals, the property of Mr. R. Loder, of Whittlebury, were sold by Mr. John Thornton. The Sholebroke herd was started seventeen years ago from the noted stocks of Mr. Adkins, of Milcote; Mr. Crawley, of Stockwood Park; and Mr. Dudding, of Panton. In 1862 Cherry Duchess 9th and Grand Duke 7th were purchased, and Grand Duchess bulls by some of the best Duchess and Oxford sires have since been used. Mr. Loder's animals consist of the Charmer tribe, descended from Coral, bought at the Milcote sale, 1860, for the Holker herd, the Craggs family of Bell-Bates blood, and some fine animals of the Revelry tribe from Dunmore, and of the Musicals from Siddington. Grand Duke 22nd (34062) has been in service with this herd since its foundation in 1873.

The sale commenced shortly after two o'clock, and in some cases the bidding was very spirited, especially in the early part of the afternoon. The highest price given for a cow was for Grand Duchess 23rd, which fell to the Earl of Bective for 2,750 guineas. Grand Duchess 29th was bought by Mr. Allsop for 2,450 gs., and Cherry Grand Duchess 4th by Lord Skelmerdale for 1,800 gs. Of the bulls the highest prices given were 1,550 gs. for Grand Duke 31st, bought by the Earl of Bective, and 1,000 gs. for Grand Duke 29th, which fell to the bid of Mr. G. Phillips.

The following is the list of animals sold, with the prices obtained. It will be understood that those not designated a "Mr. Loder's" were Mr. Oliver's.

COWS AND HEIFERS.

Circle, calved Oct. 13, 1863.—Mr. Jefferson, 43 gs.

Frivolity, calved April 18, 1869.—Mr. Severn, 83 gs.

Musical 3rd (Mr. Loder's), calved Jan. 7, 1865.—Mr. Tallock, 35 gs.

Grand Duchess 23rd, calved Aug. 17, 1869.—Earl of Bective, 2,750 gs.

Clarissa (Mr. Loder's), calved Feb. 20, 1866.—Mr. Loring, 32 gs.

Nonsuch 5th (Mr. Loder's), calved May 16, 1867.—Mr. Salmon, 26 gs.

Comfort (Mr. Loder's), calved March 31, 1863.—Mr. Mansford, 33 gs.

Rebecca (Mr. Loder's), calved March 5, 1869.—Mr. Lawrence, 63 gs.

Orange Tree, calved April 5, 1870.—Mr. Watson, 55 gs.

Ruby Lips (Mr. Loder's), calved May 6, 1870.—Mr. Roberts, 130 gs.

Ellis, calved Nov. 19, 1870.—Earl of Bective, 30 gs.

Jacob's Ruby (Mr. Loder's), calved Feb. 2, 1872.—Mr. Longman, 145 gs.

Cherry Grand Duchess 4th, calved March 7, 1873.—Lord Skelmersdale, 1,300 ga.
 Blush 2nd, calved June 5, 1875.—Mr. Attwater, 29 ga.
 Orange Chips, calved Sep. 13, 1873.—Mr. Mumford, 90 ga.
 Salina 4th (Mr. Loder's), calved Feb. 17, 1873.—Col. North, 25 ga.
 Ruby Lips 2nd (Mr. Loder's), calved Oct. 11, 1873.—Lord Penrhyn, 110 ga.
 Her roan, calved Aug. 15, 1877.—Mr. Bland, 13 ga.
 Sh lebroke Jantj, calved Oct. 15, 1873.—Mr. Beasley, 60 ga.
 Lady Ashridge 2nd (Mr. Loder's), calved Feb. 26, 1874.—Mr. Tucker, 21 ga.
 Circle 2nd, calved April 3, 1875.—Mr. Tulloch, 30 ga.
 Elegance, calved April 17, 1875.—Mr. Tulloch, 51 ga.
 Ruby Lips 3rd (Mr. Loder's), calved April 23, 1875.—Mr. Roberts, 86 ga.
 Musical Duchess (Mr. Loder's), calved June 23, 1875.—Mr. J. I.erson, 38 ga.
 Countess of Oxford (Mr. Loder's), calved July 13, 1875.—Mr. J. I.erson, 47 ga.
 Judith's Duchess (Mr. Loder's), calved July 14, 1875.—Mr. Lovatt, 46 ga.
 Grand Duchess 29th, calved Sept. 13, 1875.—Mr. Allsop, 2,450 ga.
 Lady Alice, calved Sept. 20, 1875.—Mr. Bleyard, 160 ga.
 Cherry Grand Duchess 8th, calved Sept. 23, 1875.—Mr. Allsop, 900 ga.
 Duchess Rebecca (Mr. Loder's), calved Oct. 8, 1875.—Mr. Tulloch, 40 ga.
 Red Deanna, calved Jan. 15, 1876.—Mr. Horsfall, 41 ga.
 Bella 2nd, calved Jan. 16, 1876.—Col. North, 21 ga.
 Baby Charmer 2nd (Mr. Loder's), calved Jan. 28, 1876.—Mr. Linton, 54 ga.
 Blush 4th, red and white, calved Feb. 4, 1876.—Mr. Attwater, 28 ga.
 Vivacious, calved Feb. 17, 1876.—Mr. Mumford, 28 ga.
 Roy Lips, 4th (Mr. Loder's), calved Feb. 23, 1876.—Mr. Roberts, 23 ga.
 Orange Lamb, calved April 21, 1876.—Mr. A. Garfit, 18 ga.
 Concertina, calved May 27, 1876.—Mr. T. Morris, 30 ga.
 Lady Beaujolais 4th, calved Oct. 1, 1876.—Mr. Attwater, 19 ga.
 Frailly, calved Oct. 15, 1876.—Mr. T. Morris, 32 ga.
 Diana, calved Feb. 14, 1877.—Mr. J. Roberts, 17 ga.
 Verily, calved Feb. 14, 1877.—Mr. W. Tulloch, 23 ga.
 G. and Duchess of Barringtonia, 4th, calved March 13, 1877.—Mr. H. Lovatt, 375 ga.
 Blush 5th, calved July 20, 1877.—Mr. Attwater, 15 ga.

BULLS.

Grand Duke 31st, calved Nov. 11, 1876.—Earl of Bective, 1,550 ga.
 Grand Duke 29th, calved April 9, 1876.—Mr. G. Philips, 1,000 ga.
 Grand Duke 25th, (34065) calved July 7, 1874.—Mr. A. Garfit, 505 ga.
 Tacitus 2nd, (35716) (Mr. Loder's), calved Sept. 6, 1873.—Mr. W. Tucker, 34 ga.
 Grand Duke of Waterloo (34077), calved Feb. 18, 1874.—Mr. C. Hobbs, 85 ga.
 Wild Eyed Duke (37679) (Mr. Loder's), calved Oct. 23, 1875.—Mr. Long, 60 ga.
 Cherry Grand Duke, 7th, calved Jan. 14, 1877.—Mr. Roberts, 100 ga.
 Grand Duke of Barringtonia, 3rd, calved Mar. 8, 1877.—Mr. Dodwell, 32 ga.
 Jovial Boy, calved July 25, 1876.—Mr. Woodward, 34 ga.
 Red Duke (Mr. Loder's), calved Oct. 12, 1876.—Mr. Cooper, 31 ga.
 Charming Duke 2nd, (Mr. Loder's), calved Nov. 11, 1876.—Mr. Tulloch, 21 ga.
 Lord Ashridge (Mr. Loder's), calved Nov. 21, 1876.—Capt. Burrell, 30 ga.
 Musical Duke (Mr. Loder's), calved Dec. 25, 1876.—Mr. Hamshar, 21 ga.
 Grand Duke of Darlington (Mr. Loder's), calved Jan. 19, 1877.—Mr. Lawrence, 52 ga.
 Lord Arthur, calved Mar. 28, 1877.—Mr. T. T. Drake, 31 ga.
 Lord Forester, calved April 28, 1877.—Mr. M. Sandford, 13 ga.

Grand Sultan 2nd (Mr. Loder's), calved May 6, 1877.—Mrs. Sackville, 21 ga.
 Lord Oxford Fawley (Mr. Loder's), calved May 15, 1877.—Mr. Dodwell, 7 ga.
 Orange Lad 2nd, calved May 26, 1877.—Mr. Clode, 12 ga.
 Circassian, calved June 2, 1877.—Mr. Hamshar, 6 ga.
 Duke of Craggs (Mr. Loder's), calved June 9, 1877.—Mr. Smith, 20 ga.

SUMMARY.

Mr. Oliver's.

	£	s.	d.	£	s.
21 cows	370	6	6	9,628	10
11 bulls	321	9	9	3,536	8
37 averaged	355	16	2	13,164	18
Mr. Loder's.					
17 cows	60	3	2	1,022	14
10 bulls	38	8	7	384	6
27 averaged	52	2	3	1,407	0
Average of the two Herds.					
43 cows	247	14	0	10,651	4
21 bulls	33	8	7	3,920	14
64 averaged	227	13	9	14,571	18

GREAT SALE OF HEREFORD CATTLE AT ADFORTON.

The retirement of Mr. Wm. Tudge, the celebrated Hereford breeder, and the dispersion of his magnificent prize-taking herd, has been the chief subject of conversation among agriculturists in this and other districts, and the large company that collected to witness the sale, and the spirited bidding for the best lots, goes to prove that the Hereford breed of cattle is again "looking up," and the fact that there were fresh names (notably so the Earl of Coventry and Mr. Baumgarten) among the purchasers who are forming Hereford herds must be very encouraging to the lovers of the "white faces." Although the morning was cloudy, the afternoon was all that could be desired, and the sun lighted up the oil paintings and the numerous prize cards of the various winners of the herd, which were placed on the wall at the back of the auctioneers, Messrs. Rogers and Hamar, who, although they have only lately commenced business seem to be advancing to the same high position as a Hereford salesman as Mr. Thornton and Mr. Strafford hold in the Shorthorn world. The chair was taken at the luncheon by Mr. Arkwright, of Hampton Court, who in an effective speech proposed Mr. Tudge's health, which was warmly responded to by the company. The bulls and show cows were all paraded at one o'clock, and at half-past one business commenced. As the herd was fully described in these columns so recently there will be no occasion to say more of the general merits of it, but we will merely mention a few of the animals that excited most attention. No. 1, "Brunette," is a great roomy cow of the old-fashioned sort, stands square on her legs, with great fore-quarter and deep carcass; she is forward in calf to Marshall Neil, and after a spirited competition between Mr. Green, of Marlow, and Mr. Baumgarten, was obtained by the latter gentleman at 53 ga. Mr. Green secured a famous old cow in Lady Audley, No. 8, Lord Coventry; being his chief opponent she goes back to the old Lady Ashford blood, and her grand pair of heifer twin calves showed what she can do. Bannette, No. 11, was bought by Mr. Duckham, we understand for exportation, for 80 ga.; she is a grand, long, good cow, and had a capital heifer calf at her side, which was bought by Mr. Platt for 30 ga. Mr. Baumgarten got a cheap animal in Minnet for 80 ga.; she is a beautiful cow, level all over, and being by Sir Roger, tends to enhance her value as we liked her get better than anything else sold.

Now come the Royal winners, Giantess third, at Liverpool, containing all the best Show blood, and considered by impartial judges to be the best cow of any breed in England. She fell to Lord Coventry's nod at 140 gs. Her bull calf Mr. Baumgarten got at 60 gs. The celebrated cow Rosebud, winner of so many Royal and other first prizes, besides taking the extra prize for best female in the yard at the Worcestershire Show, made 555 gs., and goes to help to adorn Mr. Arkwright's splendid herd at Hampton Court. Mr. Wyndham selected for Brockhampton a grand cow of Mr. Tudge's favourite Lady Ashford strain, in Ladybird, for which he gave 65 gs. Beatrice No. 49 Mr. Arkwright took at 100 gs., as well as her splendid heifer-calf at 40 gs. This calf, if we mistake not, will win for itself high honours if shown next year. We never saw a better. Beatrice is a magnificent heifer, out of the celebrated old cow Darling, dam of three Royal winners, excellent behind her fore-legs, grand on her top, well-covered back, and her legs well set on. She was certainly one of the plums of the herd, and we wish Mr. Arkwright every success with her. She unfortunately had met with a slight accident from another cow's horn, which rather disfigured her. No doubt, although it will soon be all right, it stopped her fetching a higher figure. The two-years-olds and yearlings fetched good prices, two of the Sir Cupis Bull heifers making 50 gs. and 68 gs. each. We have no time to say more in detail, but will add that the ninety-four females, including calves, averaged £33. 17s. 4d. each.

The bulls were brought out (as I heard remarked) in the same form as Lord Chesham brings out his sheep. More need not be said; and they did great credit to the care bestowed upon them. Marshall Niel, the sire of so many of the young stock, which proved his worth, was bought after a most spirited contest by Mr. Arkwright. The only weak point we could detect was that he was not quite perfect in his loin, but his having done so much active service may partially account for this. He has a grand masculine head, well sprung rib, great thighs and hind quarter, and is beef to the ground. He is calculated to do immense good in any herd. The rest of the bulls were eagerly competed for, especially one called Romulus, by the Doctor, out of Bannerette, which was bought by Mr. Fenn, of Downton, for 120 gs. Mr. Green, of Marlow, secured a capital thick, heavy-fleshed calf, very cheap at 38 gs. The bulls averaged £56 8s. 5d. each.

The 40 cows sold for 1,673 gs., or an average of nearly 42 gs. each; the 33 calves, which were sold with them, realised 679 gs., or an average of 20½ gs.; the two-year-old heifers in calf (14) realised 499 gs., and averaged 35½ gs.; the heifer calves (7) realised 168 gs., or an average of 24 gs.; and the 15 stock bulls 806 gs., or an average of 54 gs. The total proceeds of the sale were 3,825 gs.

FARNBOROUGH SALE OF SHORTHORNS.

[FROM A CORRESPONDENT.]

When oak and elm thrive—as they do so luxuriantly at Farnborough—the fine old pastures are well suited to grow and nourish superior Shorthorns. Many a smart, useful beast has been reared in these good meadows since 1813, when the Venerable Archdeacon Holbech's father founded the herd by the purchase of two heifers and a bull from Yorkshire. Good specimens from fashionable herds have since been added from time to time. By careful selection "the survival of the fittest" has been secured. Mr. Holbech and his zealous agent, Mr. C. Simmons, have succeeded in producing animals which conjoin in high degree profit alike for the butcher and the dairyman. From Holker, Penrhyn, and Winterfold

superior bulls have of late years been used; whilst the character of the younger calves testify to the good properties of The Berser—a level, thick, Barrington-bull, of great substance, and included amongst the fourteen bulls to be sold on October 2nd.

In the beautifully undulating, sheltered dairy-ground I recently interviewed the matrons of the herd. First came Sister of Mercy—a fine old cow from Cirencester, the bountiful mother of twelve living calves, most of them rich roans, some of them fit for training for the show-yard, several of the young calves especially notable for their big backs and beautiful mossy coats. Daffodil (No. 2 of the catalogue) is a stylish roan from Young Daisy, bought at the celebrated Bushey Park Sale, tracing back to Charles Collins's Daisy, and with five promising descendants included in the sale. A nine-year-old matron, Aveneth, by Duke of Brails, from Mr. H. J. Sheldon's A tribe, has the head and bearing of a Duchess, and most of her offspring take after her. Admirers of first-class dairy-stock must specially notice a short pedigreed tribe, but very excellent so far as they go, descended from a cow bred by Mr. J. C. Adkins, of Milcote. From this profitable Alabaster, by 11th Duke of Oxford, are four daughters that promise to fill the pail as liberally as the mother has done. Perhaps the best of a dozen of great fine cows, now in full profit, is Truth, calved April, 1871, by 2nd Earl of Cleveland from Goodness, of the Polyhymnia tribe, bought at Mr. Adkins's sale, and considered by that consummate judge one of the soundest and best of Shorthorn families. She has three female descendants, and a very good young bull. The walnut Knightley cow, Forget-me-not, from Lord Braybrooke's, although shapely, is an unfortunate yellow roan, but has consistently bred whites, which are common in many Fawcley strains. A favourite prolific Farnborough family is The Pearl—bailing from Mr. John Moore's, Kanley Castle. Of these there are seven female representatives, bearing a marked family likeness—thick, level, compact animals, and all good doers. Making up the seventy-eight animals catalogued are some other good tribes—several J.'s from Lord Dartmouth's, some Dido's from Sir Robert Peel's, a good Bates' sort, with a valuable cross of 4th Duke of Devonshire, from Mr. Noakes's Brockley head, with Duchess of Lancaster's from Mr. Langston's.

The herd, comprising sixty-four cows and heifers and fourteen bulls, is to be disposed of by Mr. H. Stradford and Mr. Finlay Dun, on Tuesday, October 2nd—the day before the sale of the Weston Park Herd.

MR. G. BLAKER'S SALE AT PANGDEAN.

On Sept. 18th the flock of Southdowns, the result of Mr. G. Blaker's long experience and ability, was brought to the hammer by Mr. E. Drawbridge, Scaynes Hill. The following were the results:

FULL-MOUTHED EWES.—TENS (368).—Mr. Cane bought the first lot at 65s. Mr. Upton the 2nd, 11th, and 16th, at 68s. and 59s. Mr. Powell bought six at 58s., and two at 59s. Mr. Duke, three at 57s., six at 58s., one at 56s., and a lot of eight at 53s. Mr. Wood, two at 58s.

SIX-TOOTH EWES.—Mr. Cane took first lot at £5. Mr. Upton bought at 72s. and 69s. Mr. Hart at 70s. Mr. Tilletson at 68s. (four), 69s. (two), 65s., and 64s. G. Hodson 64s. J. Hodson 51s. (for seven). Mr. Ellis 70s. Mr. Powell 68s., 65s., 64s. Mr. Talley 66s., 63s., three at 64s., and 65s. Mr. Gates (two) 65s.

FOUR-TOOTH EWES.—Rev. John Goring bought first lot at 73s., and Mr. W. Ridden the second at same price. Mr. Upton bought at 71s. and 70s. Mr. J. Hodson, 70s., 64s., and 67s. Mr. Tilletson, 66s. and 74s., three at 70s., 68s., 69s., 67s., and two at 65s. Mr. Upton 70s. Mr. T. Gates (two) 70s.

and 68s. Mr. J. Gander 73s., 73s., 72s., 72s. Mr. Gardner 72s. Mr. T. Gates 70s., 68s., 65s., and five for 51s. Mr. Dadey 66s. Mr. Tulley 64s.

TWO-TOOTH EWES.—Mr. J. Hodson 66s., 68s., and 61s. Mr. Upton 76s. Mr. Gander 67s., 67s. Rev. J. Goring 68s., 73s., and 69s. Mr. Knight 66s. Mr. G. Hodson 68s. Mr. Tulley 64s., 70s., 69s., 68s., 66s., 66s., 66s., 66s., 64s., 61s., 59s., 60s., and twelve for 67s. Mr. Newton 67s.

STOCK EWE LAMBS.—(Fans).—Mr. Verrall 41s., 43s., 38s. Mr. Kemaley 38s. Mr. Gates 37s. Mr. W. Hodson 35s., 31s., 36s., and eight lots of twenty at 36s., 34s., 33s., and 22s. Mr. Taylor 36s. Mr. J. Hodson 33s.

RAMS.—No. 3, a full-mouth ram, by No. 4, a descendant of the late W. Tanner's sheep, "Old Soberides," Mr. C. Ellis, 12½ gs. No. 10, a four-tooth ram, by H. Hart's "No. 13," Mr. Elliott, 5½ gs. No. 13, ditto, by H. Hart's "No. 11," Mr. Robinson, 7 gs. No. 14, do., by Mr. Penfold's "No. 24," Mr. Chandler, 5 gs. No. 15, do., by do., Mr. Davey, 3½ gs. No. 17, do., by flock ram, Mr. Smith, 6½ gs. No. 18, do., by do., Mr. W. Hodson, 11 gs. No. 1, a two-toothed ram, by H. Hart's celebrated "No. 13," Mr. Gander, 7 gs. No. 2, do., by do., Mr. Robinson, 6 gs. No. 4, by "No. 13," H. Hart's "No. 11," Mr. T. Gates, 3 gs. No. 5, do., by do., Mr. Robinson, 3½ gs. No. 6, do., by do., Mr. W. Hodson 3½ gs. No. 27, do., by do., Mr. Fryer, 2½ gs. No. 8, do., by flock ram, Mr. Robinson, 4 gs.

SALE OF SOUTHDOWN SHEEP AT SWANBOROUGH.

On Sept. 19th Mr. Drawbridge continued his list of Michaelmas sales, the gathering being at Swanborough, near Lewes, and the occasion the disposal of the flock of Southdowns and herd of Sussex beasts by order of the executors of the late Mr. John Verrall.

OLD ESTABLISHED AND PURE SUSSEX HERD.—Gentle 26 gs., Larnax; Daisy, 21½ gs., Martin; heifer calf, 9 gs., Lockins; Strawberry, 24½ gs., Tully; heifer calf, 9½ gs., Childs; Lilly, 26 gs., Gorrings; bull calf, 15 gs., Farncombe; Betty, 24 gs., Tully; Lofly, 27 gs., Colgate; heifer calf, 9½ gs., Colgate; Gentle, 31 gs., Stanbridge; bull calf, 11½ gs., Taylor; Daisy, 27½ gs., Gorrings; heifer calf, 9½ gs., Child; Gentle, 24½ gs., Ellis; heifer calf, 9½ gs., Ellis; Betty, 27½ gs., Braby; bull calf, 21 gs., Napper; Virgin, 20 gs., Gorrings; heifer calf, 9 gs., Gorrings; Waxy, 26 gs., Gorrings; heifer calf, 26 gs., Gorrings; Virgin, 30 gs., Nash; heifer calf, 15½ gs., Taylor; Rose, 23 gs., Turville; Beauty, 25 gs., Turville; Damsel, 27½ gs., Braby; Carley, 23 gs., Cooper; Damsel, 24 gs., Turville; Rose, 26 gs., Turville; Gentle, 40 gs., Gardner.

YEARLINGS.—Heifer, 18 gs., Childs; heifer, 15½ gs., Ellis; heifer, 24 gs., Braby; heifer, 20 gs., Taylor; heifer, 18½ gs., Taylor.

BULLS.—The Turk, 31 gs., Fayer; The Czar, 28 gs., Fayer; The Sultan, 23½ gs., Taylor; The Shah, 50 gs., Turner.

STEERS.—Pair of prime three and four-year-olds, £63, Gorrings; ditto, two-year-old, £58, Ellis; ditto, £50 8s., Rochester; ditto, £49 7s., Gorrings; ditto, yearlings, £52 10s., Lockins; ditto, yearlings, £44 2s., Gorrings; ditto, mixed-bred ditto, £32 11s., Gorrings; one Sussex and one mixed-bred weaners, £11 11s., Lockins.

SUSSEX WORKING OXEN.—Callant and Leader, £66, Tully; Fint and Gidding, £55, Smith; Turk and Tiger, £69, Brown; Date and Lively, £61, Tully; Frost and Foreman, £70, Smith; Part and Ploughman, £73, Turville; Rock and Rudy, £71, Turville; Back and Bender, £70, Tully.

SHORTHORN CALVES.—Pair of heifers, Gorrings, £21 ditto, Gorrings, £13 2s. 6d.

FULL-MOUTHED EWES.—By a cross from a ram bred by Mr. T. Bushby. Sold in lots of ten:—60s., Page; 55s., Taylor; 55s., Page; 56s., Powell; 56s., ditto; 56s., Taylor; 55s., Hayward; 55s., ditto; 55s., Powell; 53s., Gorrings; 54s., Hayward; 55s., Powell; 55s., Gorrings; 55s., ditto; 50s., ditto.

SIX-TOOTH EWES.—By rams bred by Mr. Hugh Gorrings. Sold in lots of ten,—66s., Gorrings; 80s., ditto; 80s., ditto;

66s., Parlett; 64s., Hodson; 65s., Parlett; 65s., Powell; 63s., Hodson; 64s., Parlett; 64s., ditto; 63s., ditto; 62s., Hodson; 57s., ditto; 55s., ditto.

FOUR-TOOTH EWES.—By rams bred by Mr. Hugh Gorrings and Mr. H. Hart. Sold in lots of ten.—80s., Gorrings; 81s., Earl of Chichester; 70s., Hodson; 69s., Gorrings; 71s., ditto; 66s., Hodson; 67s., Gorrings; 67s., Hodson; 65s., Parlett; 65s., ditto; 68s., Gorrings; 65s., Parlett; 67s., Hodson; 66s., ditto; 66s., Parlett; 65s., Hodson; 65s., ditto; 65s., Parlett; 57s., Hodson.

TWO-TOOTH EWES.—By two rams bred by Messrs. Heasman, and crossed from Mr. Hugh Gorrings and Mr. H. Hart. Sold in lots of ten.—77s., Gorrings, 72s., ditto, 72s., Turner, 69s., Gorrings, 71s., ditto, 76s., Brown, 67s., Hodson, 63s., ditto, 63s., ditto, 67s., Gorrings, 67s., ditto, 68s., ditto, 68s., ditto, 68s., ditto, 68s., Hodson, 64s., ditto, 60s., ditto.

OVER-AGED EWES (in good condition).—Sold in lots of ten.—46s., Fryer, 46s., Fryer, 44., Hayward, 44s., Atkinson, 44s., Atkinson, 43s., Atkinson.

STOCK EWE LAMBS.—By cross from Gorrings and Heasman rams.—Sold in lots of ten.—46s., Turner, 46s., Brown, 46s., Gorrings, 44s., Brown, 40s., Knight, 39s., Parlett, 37s., Parlett, 38s., Brown, 38s., Parlett, 36s., Bradford. Lots of twenty.—36s., Bradford, 35s., Brown, 33s., Hodson, 33s., Fryer, 32s., Fryer.

RAMS.—Six-tooth ram, 9½ gs., Tully; four-tooth, 8 gs., ditto; ditto, by a Southwick ram, 10 gs., Lomax; ditto, 6½ gs., Tully; ditto, 9 gs., Colgate; two-tooth ram, 4 gs., Tully; two-tooth, 4 gs., Tully; two-tooth, 3 gs., Fryer; two-tooth, 3½ gs., Fryer; two-tooth, 4 gs., Tully; two-tooth, 5 gs., Tully; two-tooth, 5 gs., Tully; two-tooth, 5½ gs., Tully; two-tooth, 5 gs., Tully.

RAM LAMS.—By cross from Gorrings and Heasman rams.—7½ gs., Wood, 3½ gs., Hodson, 4 gs., Tully, 7 gs., Wood, 6 gs., Gorrings, 2½ gs., Tully, 3½ gs., Fryer.

THE LOTHIAN RAM SALE.

These annual ram sales were held in the Warrender Park, near Edinburgh, on September 12th and 13th. The trade was generally dull, and prices were, in most cases, a few pounds down from last year. With such a prospect as is before them this year, the Lothian farmers have no great inducement to give large prices for rams. The harvest is unprecedently late; oats in the upper districts of the Lothians are, to a large extent, quite green yet, and the turnip crop, upon which so much is now depended for the feeding of sheep, is almost a failure. For all kinds of fat stock, moreover, there is a quiet trade. These circumstances have contributed to make the Lothian ram sales this season worse for sellers than they have been for many years. The number and character of the rams disposed of in the two days have been up to the average of former years, although, owing to the bad spring weather, one or two uneven lots might have been seen. On the Wednesday, as usual, the blackfaced and Cheviots were sold, Thursday being Border Leicester day. The best lots of blackfaced were from Overshiels, Westown, Listonshiels, and Westloch, which brought the highest prices. A magnificent ram from Westown brought the highest figure of the day—namely, £52, the next highest figure being £40, which was paid for a ram from the Listonshiels's lot, which has been remarkably well brought out this year by Mr. Aitken. The Overshiels lot, which usually contains the highest-priced ram, only brought a top figure of £36, this sum being paid for the sheep which was second as a yearling at the Aberdeen Show of the Highland Society. The average and highest of the other principal blackfaced lots were—Westloch, £6 7s. 8d. to £20; Culteralliers, £6 7s. to £15; Glentagart, £4 12s. 10d. to £15 10s.; Yorkston, £4 6s. 5d. to £13; Burncastle, £6 to £12; Harperrigg, £4 9s. 3d. to £20. For the Cheviots there was a good demand; but this may be owing to farmers going in for the breeding of the pure-bred Cheviots, which

stand the storms better than the half-breds in the upland districts. The average and highest of the principal Cheviot lots were: Archbank, £6 12s. 2d. to £23; Bonally, £4 16s. to £10 10s; Manorhead, £7 to £11; Mount Lothian, £6 2s. 3d. to £9 10s. The prices of the Border Leicesters have been the most affected by the unfavourable circumstances as to trade and crops. The Oldhamstocks lots, which is the greatest attraction of the Sale for the size of the sheep, the great wealth of wool and mutton beautifully carried, only brought a top figure of £85, and an average of £19. Last year the average was about £26, and the highest £100. The £85 ram was bought by Mr. Smith, Stevenson Maina, and was the one which took the first prize and champion cup at the Northumberland Show recently. The highly commended ram at Edinburgh and second at Newcastle was bought by Mr. Balfour, of Wittinghame, for £57. The Castlemain's lot, which often tops the Sale, had a highest only of £32. As usual, the largest lot (90) was from Bonnington. They were big heavy sheep, and brought an average of £8 8s., and a highest of £32. The Royal first prize sheep in this lot brought only £20. The average and highest of the other principal lots of Leicesters were: Wittinghame, £9 6s. to £13 10s.; Oxwell Maina, £6 to £31; Stevenson Maina, £7 13s. 4d.; Marquis of Tweeddale, £5 19s. 10d. to £20; Earl of Morton, £7 16s. 6d. to £18; Duke of Buccleuch, £8 to £20; Hillend, £7 to £41 (this was given for the third-prize sheep at the Edinburgh Show of the Highland Society); Hardengreen, £5 5s. to £12; Marvington, £5 16s. to £10; Wolfstar, £5 10s. 4d. to £10; Craigend, £6 7s. to £12. Mr. Gibson, Woolmet, Mr. Bell, Whitehall, and Lord Polwarth had forward a few good Cotswolds, Lincolns, and Shropshires, which brought good prices.

KELSO RAM SALES.

The weather on Sept. 14th, at the Annual Border Ram Sales, held at Kelso, was in fine contrast to that which characterised the Lothian Sales at Edinburgh the two preceding days. The morning was dull, but as the day advanced the clouds cleared away; and during the sales the weather was dry, sunny, and breezy. There was, as usual, a large attendance of farmers from a wide district on both sides of the Tweed. There were fully a hundred more sheep forward this year than last; while the general character of the sheep was equal to former years. Some of those breeders who have entered the field at a comparatively recent date were observed to have their lots, in many respects, improved from last year, while one or two of the older breeders might be seen with a very uneven lot to show. This was, no doubt, owing to the severe weather during the past spring which some of them had to contend with, especially in the upland districts. As was expected, the unfavourable circumstances as to trade and crop operated here, as at Edinburgh, against high prices, indeed tended to material reductions. The principal feature of the sale here is the passing of the Mertoun lot through the ring, which always brings the top price of any, either at Edinburgh or Kelso. The highest figure on Friday of this lot was £150; and the average £29 16s. 6d.; while last year the highest was £180, and the average about £37. The Mertoun sheep were very well brought out this year, both in coat and countenance, although they were not in high condition. Mr. Torrance, Sisterpath, an enterprising breeder, bought the £150 Mertoun ram. It was started at £50, but the figure ran up rapidly with £5 bids from Mr. Thomson, Baillieknowe, and Mr. Torrance, when it was knocked down to the

latter gentleman, amid much excitement, at the above mentioned figure. This ram is a lengthy, beautiful-skinned sheep, with a sweet head, and grand hind-quarter, but is perhaps not so well covered on the back, nor so well sprung in the fore-rib, as one might desire. A large vigorous, well-coated sheep, but with moderate head, was knocked down to Mr. Elliot, Hindhope, at £65. Another at the same figure, with grand back, loin, and coat, went to Mr. Jack Mersington. In the opinion of many the most stylish sheep in the Mertoun pen was secured by Mr. Clark, Oldhamstocks, for £53. Other sheep of unusual merit in the Polwarth lot went to the Duke of Buccleuch at £34; Hon. R. Baillie Hamilton, M.P., at £43; Mr. Browne, Duxford, at £64. The Mertoun sheep in 1873 brought a highest figure of £195, which is still the highest price ever paid for a ram. To give an idea of the interest which is manifested while the sale of these sheep is going on, it may be mentioned that so thoroughly deserted were the other sale rings at the time that several sheep passed through without a bid, or one which was not at all satisfactory. This was the case with the Hawick House (late Ellingham) sheep, which were afterwards sold privately. The Mellendean lot, which was splendidly brought out this year, with larger frames and rougher coats, brought a highest of £90, which was paid for a stylish sheep by Mr. Goodlet, Bolshair. The Mellendean average was £18 18s. 2d. The highest last year was £120, and the average £27, so that it will be seen there is a considerable reduction in price in this lot. Other handsome sheep from Mellendean went to Mr. Bell, Linton, at £32, and Mr. Robeson, Springwell, at £30. The Sisterpath sheep, which have been forward in better form, especially as a more even lot than in former years, brought a highest of £34, which was paid by Mr. Archibald, Glengelt, at an average of £13 3s. The Sisterpath highest last year was £86, and the average £20 8s. 2d. One or two young breeders make a fine display this year, and their prices instead of having been reduced are increased. Mr. Thomson, Baillieknowe, had a highest last year of £30. This year it is £45, while the average is about the same as last year. The Legars and the Harriestfield sheep have also more than maintained their prices this year. The pens from the southside of the Tweed make an unusually good display. First among these come the Rock sheep with fine coats and large shapely frames, which brought a highest of £15 10s. and an average of £8 6s. 9d. Mr. Tweedie, The Forrest Catterick, with his large-framed, wealthy, woolly sheep, secured £17 as his highest price, and an average of £8 1s. 4d. Mr. A. H. Browne, Duxford, Chathill, with well-bred sheep, got a highest of £14 13s. and an average of £8 4s. 6d. Mr. Earle Ellerton, Catterick, although this is only his second year as a Border Leicester breeder, had a highest of £6 10s., and an average of £3 5s. Mr. Wilson, Woodburn Manor, who had a pen of well-bred handsome sheep, got a top price of £18 5s., and an average of £5 14s. The following are the averages and highest of the other principal lots not yet mentioned—Chanton Park £5 7s. 8d. to £11; Blagdon, £8 8s. 6d. to £12; Whitefield (Morpeth) £5 10s. to £9 10s; Middleton, £4 18s. to £10 10s; Linton, £8 6s. 3d. to £25; Ancrum Craig £8 11s. 8d. to £12; Moneylaws, £9 16s. 5d. to £13.

There were a good many splendid lots of half-bred rams disposed of. Mr. Mark, Craighad, Stow, as usual gained the highest figures for his heavy well-bred sheep in this department. His highest was £23 10s. and his average £10 18s. 6d. The highest and average of the other half-bred lots of great merit were—Rosedale £10 5s. to £5 1s. 8d.; Sisterpath £14 to £6 14s. 6d.; Watherstone £12 to £6 9s.; Middleton House, £16 to £10 9s. 9d.

LIVE STOCK NOTES.

Mr. Cheney's sale was looked forward to with extra interest, as all hoped so spirited a breeder would obtain remunerative prices, and there was difficulty in the anticipation, seeing that the plum entered, the Fourteenth Duchess of Ardrrie, had come to such an unhappy end. And this difference was felt all the more when the company came to inspect her son, the fine young bull 7th Duke of Gloucester, now, after a rattling fight between Lord Skelmersdale and Mr. Drewry, the property of the Duke of Devonshire. It was further said that his half brother, the dead Duchess's calf, though also entered in the catalogue, had succumbed to the effects of "hair ball" only a few days before. There was some discussion as to how to prevent this very fatal contingency, from which Lord Skelmersdale's young Duke died some months since. The most approved plan seems to be to brush the animal often; because it is supposed to arise from the calf's licking himself as much as from licking his fellows. Whatever their own appearance, and they differ much, there is no doubt that a Duke bull is wonderfully "impressive." It has begun to be admitted, too, that such of the tribes are none the worse in appearance which have in them a slight dash of Booth blood. How should they be, seeing that, as I have often pointed out, the old favourite blood of Richard Booth's best day was, as nearly as possible, identical with that of the Cambridge Roses? Is the noble 24th Duke of Ardrrie any the worse for such a cross? Our leading breeders do not think so, or they would not send him their cows as they do. To what, again, may be attributed the broad level back a Grand Duke so often shows. At Bowness the amalgamation in the Duchess of Millhurst, which Lord Beattie secured, was remarkable, especially about the quarter and thigh, and in Mr. Loder's in the loin plate and handling. If Mr. Bates had lived till now it is impossible to know what he would have done, for something, as we know, he must needs have essayed; but we have it for our guidance that he was *bold to select when obliged*, and we must now be thankful that those breeders of the present day whose herds stand the highest keep continually infusing new spurts of blood, with evident advantage to the growth and constitution of their cattle. Of course it requires great judgment and knowledge to ensure safe effects under such a policy, and the multitude, as now, will do best to invest their money in that which has "already" (to quote Disraeli's contemptuous remark as to the late Sir Robert Peel's poetical quotations) "obtained the meed of public approbation." But for the leader it will be interesting as advantageous to take such prudent dips as he can into fresh blood, so as to resuscitate any inherent debility, which may be due to too close crossing, in a breed of cattle which has now become undoubtedly cosmopolitan, and upon the pure strong vintages of which there will be now a swifter draft than ever to improve those foreign herds whose destiny it is to send back dead beef for the working hive of old England. First crosses are beautiful, but they are short-sighted who export or use such. Even after seven or eight crosses extraordinary "sports" of colour and shape will occasionally come out. To return to this sale, however: there was a strong demand for the Oxford, Duchess, and Wildeyes' strains. There was a certain indifference as to the other sorts. It looks as though in these straitened money times men were averse to general expenditure, at the same time that the above-mentioned sorts are keenly demanded, the supply being limited. The course of the first-night breeders is evident. They cannot crane, or they will

soon lose their place. But there is the opportunity of obtaining remunerative returns if the Shorthorn demand continues, as assuredly it must, on a lower level. What is wanted amongst breeders is a more thorough study of the three first volumes of the "Herd Book." To buy at Birmingham and elsewhere fine specimens at random (as so many do who tell you they do not care for fashion, they only want to breed good cattle) and cross them, may accidentally bring forth what they require, but as a rule must be as ruinous in the end as purchasing half-breds at a horse auction to cross with Doucester or Blair Athol to breed racers from. Where are the excellent young Seagull tribe? Where are the descendants of Coates's Patriot? The Mason tribes and the Knightleys are being looked up. Let the beginner buy, if he can, only one good cow of ancient unpolluted lineage, and send her to the splendid bulls of which there is a plethora, and, with fair luck and judgment, in time he will have a remunerative and enjoyable herd. Jonas Webb bought good cows, supposed to be barren, and by his skill brought them round to be productive. S. E. Bolden did the same. Mr. T. Griep followed suit. Are no youngsters so inclined? I cannot call it daring, for the money venture is *nil*. In the reserve herd Mr. Cheney has a couple of especially good American Princesses, a tribe upon which he lays great stress, a decision wherein he only follows the breeders of forty years ago; for that line of blood is the oldest known in England. Those two in particular caught my eye, but he has nine others of the same origin. He has also a Fantail and Darlington 12th, got by Duke of Geneva (18614), dam by Marmaduke (14807); if that is not a good one of this very rising tribe, with such fires, what can it be? He has also the best specimen of Bates on Knightley I have ever seen, the very symmetrical, well-grown, and stylish Princess Alexandra. There is the famous old cow Wild Oxford, thirteen years of age; but still of good frame, and a cow that at first glance one takes for a Siddington from her head. She turns out, however, to be Wild Eyes 30th by 7th Duke of York, Mr. Bowly's celebrated pet sire, and who came to Gaddeby under such speculative circumstances; for which, however, this one cow would reward Mr. Cheney. With this choice lot of about a score females, with a Duchess and an Oxford bull left, there is the foundation of a large cheque left. Fortunate are those in the first swim!

Even in the best of herds there will be some pre-eminent in one point or another. Thus at Gaddeby Lady Wellesley 2nd was remarkable not only for the general evenness of her build, and her especially Shorthorn character as for her breadth of beam from crop to hip, about the first point to be considered in the meat-producing animal. Old breeders hung in admiration over her on the pasture, and she did herself justice in the ring. Mr. Rawston, who is commencing a high flight, was most lucky to obtain her. Such backs do charm! How well one remembers a Gazelle sold at Siddington, in a lot of three, and secured by Lord Fitzhardinge, just similarly endowed!

There was one in this throng, at Gaddeby who had special reasons for jollity, and that was Colonel Gunter, whose pluck in snatching from the American the Duchesses at Tortworth is a matter of history. Of three bull calves which I saw at Wetherby a few months since he has sold one, a rich rean, the 5th Duke of Clarence, nine-

months old, by the 18th Duke of Oxford out of that exquisite white bow Duchess 109 (and own brother to the 4th Duke of Clarence, sold to go to Canada for 2,500 guineas), to Mr. Allsop, who has been putting together of late by purchase some splendid elements of future herd success, under the pilotage of the skilled veteran Mr. Rich (of Didmarton, as all old breeders think of him), for 2,000 guineas. Another bull calf, eleven months old, the 7th Duke of Tregunter, by 6th Baron Oxford, out of Duchess 110, her dam the magnificent Duchess 94th, whose likeness hangs in the hall at Wetherby, and who unfortunately perished from the effects of eating sanded hay, Rev. F. Graham selected (having first choice of the three) for the same sum. The third calf is retained by the happy Colonel, whose enjoyment by the cover-side of a fine hunting morning must be intense when he remem-

bers his possession of a few milking cows who discharge him regularly in their produce what heaps of men would esteem an enviable income. Lucky man we must not call him, but successful, as we remember an Oxford tutor of our day was said to have corrected the old college squire, who with an eye to beer had congratulated his young master on the attainment of a first-class. "Not lucky, John, successful," was the immortal rebuke!

The Shorthorn world will be delighted to hear that the 8th Duchess of Oneida, at Underley, has been delivered of a dead calf, five months over-due. It appeared never to have quickened. She was condemned as dropsical. She is dam of the Duke of Manchester's three thousand guinea bull. Once I knew of a cow that produced a dead calf, and three months after a live one.

VIGIL.

TARE ON HOPS.

GREAT MEETING OF HOP GROWERS IN LONDON.

Pursuant to notice, a meeting of hop growers was held at the Bridge House Hotel, London Bridge, recently, to consider as to what action should be taken with regard to the declaration of merchants "not to go into stock with the new hops, and to restrict new purchases as much as possible, unless full tare is ceded." There was a very large muster of principal growers in East Mid Kent and Sussex; amongst the number (some 160 in all) were:—Messrs. W. Carter and Charles Whitehead (chairmen respectively of the East Kent and West Kent committees of last year), W. H. Hodson, Chas. Neame, Robert Neame, C. Noakes, J. Noakes, Geo. Neame, Edwin Neame, Hilder, W. Milnes, Jas. Marten, W. Waterman, J. Roper, J. Thompson, Ambrose Wards, Chas. Gibbs, Jas. Thompson, T. Reed, A. Chittenden, G. Rile, G. Neve, G. Brissenden, J. T. Best, J. Prebble, W. F. Harvey, G. Bieg, A. Collard, Pye, Harris, Larga, A. Bath, A. Cripe, Mannington, H. Blasland, Maynard, Williams, Buss, Brine, Thirkell, W. Reeves, Taylor, Mannering, Batchelor, Wilnot, W. Crisp, Hammond, Pemble, T. Reeves, Gibbon, T. Coveney, Garrell, Hartridge, Blinkhorn, Welfear, Chambers, Dawson, W. May, H. Solomon, T. Powell, B. Roper, Smith, T. Twort, Kingsnorth, L. Killick, Dawson, Huntley, Barrett, Farnham, Hopkinson, Worcester, &c. &c. The meeting was of the most enthusiastic character, each resolution being carried with acclamation and without a single dissenter.

On the motion of Mr. W. Carter, Mr. Chas. Whitehead was voted to the chair.

In opening the proceedings, the Chairman, who was received with cheers, said—Gentlemen, in the first place some sort of apology is necessary for having called you together at this busy season of the year. Mr. Carter, the Chairman of the East Kent Committee, and I felt it was very inconvenient to all of you—to all of us I may say—to attend a meeting here to-day, but we felt also that it was most important and most necessary, after the resolutions which were passed by the merchants lately, that we should as quickly as possible communicate those resolutions to the whole body of growers in Kent and Sussex, and get their opinion before the season commenced. It will be in the memory of many of you that last March twelvemonth this subject of tare was agitated by the merchants, who asked for full tare. The growers met at various centres in the hop-growing districts—Maidstone, Canterbury, Worcester, Farnham, and other places—and they met the tare question in a liberal spirit, fixing the tare at 5 lb. Then an arrangement was submitted to the factors in this very room, in the month of May, and they agreed unanimously that it was a very just and liberal concession on the part of the planters, and undertook most loyally and manfully to back up the growers—thus forming that "unsound combination" which the merchants have alluded to in the resolutions they have passed, which combination, I venture to say, was no more than what every producer, every seller, of articles makes with the factor who is his agent. The merchants practically ac-

cepted that tare arrangement and bought hops on those terms without any protest during the whole of last season. It is only now when they think there is going to be a change, when they think the crop probably will be a large one, and that therefore the planters are not in quite such a position to resist it, that they come forward with the unfair argument that this arrangement which they accepted last year is not binding upon them, and that for the future they must have full tare. This resolution of theirs fell upon us, I may say, as a kind of small bomb-shell. I will read the resolution to you, so that we may proceed straight to the matter:—"As an adjourned meeting of hop merchants, held at the office of Messrs. Wigams and Cowler, 15, Southwark-street, August 27th, 1877, Mr. George Hanbury in the chair, it was proposed by Mr. Rhodes, seconded by Mr. Gibbons, and carried *nem. con.*: 'That in the opinion of this meeting no settlement of the tare question which involves payment for the cloth can be admitted; and having in mind the unsound combination now in force between hop growers and factors, and having in view the very large aggregate growth of hops of this year, the merchants here assembled are of opinion, and hereby resolve, that it is important to restrict purchases within the smallest possible limits on the opening of the season, with a view to bring about full tare.' Proposed by Mr. Jackson, seconded by Mr. Tabary: 'That full tare be equally required upon all foreign hops.' Resolved that this meeting be adjourned to Friday, November 2nd, at three o'clock. These resolutions to be printed and sent to each merchant and factor." Those gentlemen, are the resolutions, copies of which were sent to Mr. Carter as Chairman of the East Kent Committee, and to myself as Chairman of the Mid Kent Committee; and we immediately acted to the best of our judgment and called a meeting of the joint committee at Maidstone. At that meeting it was resolved that Mr. Carter and myself should be a deputation to wait upon the merchants and confer with them upon these extraordinary resolutions of theirs. I wrote to the chairman of the merchants, Mr. Hanbury: I had better read the letter to you:

"Maidstone, August 30th 1877.

"My Dear Sir,—Tare on Hops.—At a meeting of the joint committees of Kent and Mid Kent held to-day at Maidstone, Mr. Carter and myself, as chairmen of these respective committees, were requested to confer with the merchants, or with a deputation from the merchants' committee on the subject of tare on hops at an early day. I am therefore to ask whether it will be agreeable for the merchants' committee to confer with us upon this question, and whether Tuesday next will be a convenient time for such conference.

"Yours truly,

"CHARLES WHITEHEAD."

The next day I had a letter from Mr. George Hanbury:—

"My Dear Sir,—A meeting shall be called of the merchants on Monday week, the 10th proximo, and your letter shall be

placed before them. I will then write to you again immediately and I hope some arrangement will be made to settle this unfortunate question of the tare upon hops.

"Truly yours,
"GEORGE HANBURY."

When we received that letter Mr. Carter and I felt it was creating an unnecessary delay, that if we left the question for the merchants' meeting, to-day there would be further delay and then we should have to call you together after that to listen to any proposition that might be made. Therefore we resolved to take the bull by the horns and call you together to-day, that you may consider these resolutions and to ask you to join together in adhering, to the spirit and the letter, to the resolution you came to last year. I think, gentlemen, I need not trouble you with any argument as to the abstract justice of our case, as there can be no doubt about it. It has been conceded by all that we have right and justice on our side, that there is due to us a certain return for the valuable cloth in which our hops are packed. One of the arguments used by the merchants is that full tare is given for other commodities. Let me point out that those other commodities are wrapped or packed in trumpery cases or trumpery coverings and that our cloth is used for the protection of the hops long after they have left our hands, to keep them perhaps for years, for the sake of speculators, or for the sake of consumers. Looked at as an abstract question of justice we have justice and right on our side, and I hope you will all agree to-day to adhere to the arrangement made last year, an arrangement which has been acted upon and carried out and which has been found to work very satisfactorily. It seems to me a monstrous and unprecedented thing that a small body of men should dictate to a large and influential body of hop planters using 70,000 acres of land and whose production annually amounts to something like £3,000,000 sterling—that that small body should assume that they can restrict the legitimate action of supply and demand—to say that if you hop growers do not give a certain small thing, namely, give 2 lb. or 3 lb. of cloth, they will stop the whole trade in hops throughout the country. I will not trouble you with any farther remarks of my own, but I will now call upon Mr. Ambrose Warde to move a resolution.

Mr. Ambrose Warde said that, as the chairman had stated there had been a meeting or two held by the joint committee, and they had asked him (Mr. Warde) to propose the following resolution at the present meeting:—That this meeting advises the planters to adhere to the resolution so unanimously agreed to last season." The chairman had stated so well the object of the meeting—the reasons for which they were called together—that it left him Mr. (Warde) very little to say. (It did seem to him a very unfair thing that they should be asked to give the merchants the whole weight of the pocketing of their hops. They had to pay for the pocketing and the bales when the hops came to them, and yet the merchants wanted not only what they call full tare, but they wanted, as they had now, samples and various other things, which amounted to a great deal in the course of the year. All those present so well understood the resolution so fully discussed throughout all the parishes of the hop-growing districts last year that it was quite useless for him to dilate further on the matter. He would simply move that they adhere to the resolution passed in 1876—for a 5 lb. tare.

Mr. Charles Neame seconded the resolution, which was carried unanimously.

AGRICULTURAL GROWTH IN THE UNITED STATES.—It is of interest to know something about how rapidly the public domain is being set apart for farms and houses. Before the desert land scheme was put to such wide use, and consequently before so large a proportion of city clerks and office hands acquired a nominal right to estates, there was a report made to Congress by the Secretary of the Interior on the sale and pre-emption of the public lands. During the year ending June last, there were taken up, under the homestead law, 2,879,909 acres. New land taken up under the homestead law is for actual cultivation, and it is generally taken in lots of 160 acres. It would appear, therefore, that more than 17,000 new farms were commenced last year under the homestead law alone. But this is not all. There

were sold during the year 640,691 acres for cash, and 137,640 acres were allotted on military land warrants. It is no doubt true that one-half of these 778,331 acres were bought for the purpose of immediate settlement and cultivation; and this calculation would give us 2,432 new farms of 160 acres each. There were also 21,048 acres entered upon the Sioux and Chippewas half-breed scrip, and 607,984 taken up under the timber culture law. Leaving these two latter items out of the calculation, we have an aggregate of about 19,500 farms commenced during the year. This means 19,500 new homes.—*Pacific Rural Press.*

COOLING DOWN.—"Who struck Buckley?" is a common phrase used to irritate Irishmen. The story is that an Englishman having struck an Irishman named Buckley, the latter made a great outcry, and one of his friends rushed forth screaming, "Who struck Buckley?" "I did," said the Englishman, preparing for the inevitable combat. "Then," said the Hibernian, after a careful investigation of the other's thighs and sinews—"then serve him right."

OSMAN PACHA.—There is a great deal of speculation and mere idle gossip about Osman Pacha, who will long be remembered as the Turkish general who first inflicted a serious disaster on the Russian invaders, and as the defender of Plevna. It was long pretended that he was Marshal Bassine under another name; and now it is said that he is an American, distinguished in the Civil War. In fact he is neither, but a thorough and complete Turk, of one of the oldest families in Turkey. He studied the art of war at Woolwich, and subsequently on the Continent.—*Family Fuir.*

MAD DOGS IN PARIS.—The French police, either more active or more wisely directed than our own, wage war with considerable effect against mad dogs. Thus in 1875 the number of mad dogs destroyed by the police at Paris amounted to 276. During 1876, 310 were killed. Up to September of the present year the number has reached 217. Amongst the slain was, it is said, the celebrated greyhound sold by Lord Salisbury to a Parisian Cockney for £400. Fifteen days afterwards the greyhound was bitten by a "bull-dogne hydrophobe," and forthwith was despatched by the authorities, "absolutely," we are told, "as if he had been a Turk."—*Medical Examiner.*

ON CHOOSING A HOUSE.—Before you enter a house that you have some thought of taking, do not fail to take a look, not only at the exterior thereof, but at the neighbourhood around it. Do not, however, be too much struck with a showy outside; the place may be but a whitened sepulchre after all—a very living grave. The house, too, may be in itself, both outside and in, everything which heart can desire, but after all, it may be situated in the vicinity of other houses, either at the back or front, the conduct of the inmates of which may render your life wretched. Your rooms may be furnished with taste and comfort, but if you are awakened every other night by the sounds of drunken revelry, or maybe fighting and squabbling, your life will not be a very romantic one to say the least. Again, however tastefully your garden may be gotten up, however shady and cool your summer-house, the sound of voices in altercation, or perhaps oaths and swearing, floating over the ajoining wall will detract materially from the pleasure you derive from the society of a friend or favourite author. Having satisfied yourself regarding externals, it will be time now to have a peep inside, and the very first thing it is your duty to find out is whether or not the house be damp or dry. Nothing can be more injurious to the health than residence in a house which is damp; coughs and colds, aches and pains, and rheums—ay and maybe fever itself—must be your portion if you are unwise enough to live in a damp house, and granting even that you have the strongest of constitutions, dampness will sap it, your nerves will be weakened, you shall find yourself ill and fretful without being able to assign a cause therefor. Avoid a damp house, therefore: you can hardly fail to know if it is damp. Suspicious spots of mildew about the paper, beading on unpapered walls, and a generally moist smell must guide you in your diagnosis. More deadly even than damp are the emanations from drains and cesspools and noxious gases, such as sulphuretted hydrogen and carbonic acid. If you mean to live for any length of time in a house, it will be much better to put the matter in the hands of a trustworthy surveyor, and let him see to this matter.—*Cassell's Family Magazine.*

the same as last week. English oats 1,030 qrs.; Scotch, 50 qrs.; foreign, 72,067 qrs. Exports 27 qrs. Oats are not in active demand, but prices are 3d. to 6d. dearer than last Monday. English Beans, 302 qrs.; foreign, 2,000 qrs. Beans and peas meet a steady sale, at full prices. Linseed, 4,013 qrs. Exports, 760 qrs. Linseed in fair request, and the turn dearer.

IMPERIAL AVERAGES

For the week ending Sept. 23, 1877.

Wheat	57,140½ qrs.	57s. 6d.
Barley	4,758½ "	43s. 6d.
Oats	3,086½ "	25s. 10d.

LONDON AVERAGES.

Wheat	1,013 qrs.	63s. 6d.
Barley	304 "	45s. 6d.
Oats	— "	—s. 0d.

COMPARATIVE AVERAGES.

WHEAT.			BARLEY.			OATS.		
Y. era.	Qrs.	s. d.	Qrs.	s. d.	Qrs.	Qrs.	s. d.	s. d.
1875	77,440½	61 2	35,399½	44 8	5,633½	37 0	27 0	27 0
1876	71,76½	46 9	51,784½	41 11	4,186½	37 9	37 9	37 9
1875	51,830½	47 1	9,925	35 9	3,56½	36 7	36 7	36 7
1876	65,75½	47 0	13,698½	38 6	3,762½	36 7	36 7	36 7
1877	57,140½	57 6	4,758½	43 8	3,086½	25 10	25 10	25 10

AVERAGES

For the Six Weeks

	Wheat.	Barley.	Oats.
s. d.	s. d.	s. d.	s. d.
Aug. 18, 1877	61 9	33 9	27 10
Aug. 23, 1877	63 10	33 9	18 4
Sept. 1, 1877	63 0	34 6	27 5
Sept. 8, 1877	60 8	30 0	28 5
Sept. 15, 1877	59 0	40 1	27 2
Sept. 22, 1877	57 6	43 8	25 10
Aggregate Avg. of above	61 6	37 3	27 6
The same period in 1876	46 4	35 7	27 4

FLUCTUATIONS in the AVERAGE PRICE of WHEAT

From.	Aug. 18.	Aug. 25.	Sept. 1.	Sept. 8.	Sept. 15.	Sept. 22.
64s. 9d.
63s. 10d.
63s. 0d.
60s. 6d.
59s. 0d.
57s. 6d.

FOREIGN GRAIN ENTERED FOR HOME CONSUMPTION DURING THE WEEK ENDING SEPT. 23.

Wheat	297333 cwt.	Peas	5536 cwt.
Barley	23575 "	Maise	29849 "
Oats	131783 "	Flour	30199 "
Beans	10610 "		

CORN IMPORTED AND EXPORTED

FOR THE WEEK ENDING SEPT. 15.

	Imported into			Exported.	
	Engl'd.	Scotl'd.	Ireland	British	Foreign
Wheat	651704 cwt.	123039 cwt.	163455 cwt.	6789 cwt.	46857 cwt.
Barley	85458 "	43368 "	10000 "	150 "	968 "
Oats	130692 "	38791 "	...	433 "	1578 "
Rye	9187 "	...	...	...	...
Peas	538 "	1025 "	...	130 "	...
Beans	7335 "	97776 "	...	...	161 "
Indian Corn	227106 "	67891 "	146280 "	...	7333 "
Buckwheat	2061 "	...	...	...	...
Total	1180184	370930	328745	7612	56914
Wheat Flour	93162	26111	11782	560	381
Oat Meal	4810	...	...	465	...
Rye Meal	3975	14	...	...	10
Indian Corn Meal	351	...	...	...	...
Total	102298	26165	11782	1025	381
Grand Total	1382482	397085	340527	8537	57305
Mal.	...	...	...	1772	...

REVIEW OF THE CATTLE TRADE DURING THE PAST MONTH.

During the month the cattle trade has been free from any important feature. Supplies mostly have been short, and although business has generally lacked activity, steadiness has prevailed. The deliveries of beasts from Lincolnshire, &c., have fallen materially short of the corresponding month last year. Those from Scotland have been slightly heavier, whilst Ireland has contributed a much more liberal supply. The foreign receipts have been much less. From America the supplies were considerably less, and those from Spain and Denmark were also contracted. At Deptford there have been large detentions of Tonsing stock and these have, in some measure, compensated for the deficiency in other quarters. As regards the state of trade, quietness has been the more distinguishing characteristic. The best Scots and crosses have however in some instances made as much as 6s. 21. per 8 lbs., but that quotation has not been uniform throughout the month.

The total supplies of sheep to hand have been much below the quantity offered in September, 1876. The trade has been generally steady, and not unfrequently rather active. Quotations have ruled tolerably firm, the best Downs and half-breds making 7s. 2d. per 8 lbs.

Calves and pigs show no special movement.

The following shows the extent of our imports during September:

	1876.	1877.
Beasts	19,133	9,013
Sheep	73,570	59,458
Calves	3,627	1,740
Pigs	1,940	2,301

From our own grazing districts the receipts were as under:—

	1876.	1877.
Lincolnshire, Leicestershire, and Northamptonshire	10,750	7,900
Other parts of England	1,910	1,660
Scotland	9	39
Ireland	770	2100

The total supplies of stock exhibited and sold were:—

	1876.	1877.
Beasts	30,310	14,445
Sheep	112,170	46,473
Calves	4,620	765
Pigs	165	205

Beasts have sold at from 4s. 6d. to 6s. 2d.; sheep, 5s. 6d. to 7s. 2d.; calves, 5s. to 6s. 4d.; and pigs, 4s. to 5s. 4d. per 8 lbs., asking the offal.

COMPARISON OF PRICES.

	1876.	1875.
s. d.	s. d.	s. d.
Beasts	3 4 to 6 4	4 0 to 6 2
Sheep	4 0 to 7 4	4 6 to 7 6
Calves	4 6 to 6 6	4 6 to 6 4
Pigs	4 6 to 5 6	4 6 to 5 4

Cobent Garden Market.

FRUIT.

	s. d.	s. d.		s. d.	s. d.
Apples, W half-sieve	2 6	to 3 6	Oranges, W hundred	12 6	to 13 6
Apricots per box	0 0	0 0	Peaches, per doz	6 0	10 0
Cherries W half-sieve	0 0	0 0	Pears, W dozen	1 0	1 0
Cobs, per lb	0 4	0 4	Pine Apples, W lb	4 0	10 0
Grapes, W lb	0 5	0 6	Strawberries, W lb	0 1	0 1
Lemons, W hundred	8 0	12 0	Eggs, green, each	0 1	0 1
Melons each	2 0	5 0			

VEGETABLES.

Artichokes, per bus.	0	0	to	0	0	Min't, grn., per bunch	0	6	to	0	6
Eng. Globe, doz.	2	0	to	2	0	Mushrooms, W potale	1	0	to	1	0
Beans, Fr., new, W b.	5	0	to	5	0	Onions, W 12 bunches	3	6	to	3	6
Beet, per dozen	1	0	to	1	0	Young, W bundle	0	6	to	0	6
Cabbages, per dozen	1	0	to	1	0	Parley, per bunch	0	9	to	0	9
Carrots, W bunch	0	4	to	0	4	Peas, green, per bush	3	0	to	3	0
New French, per b	0	0	to	0	0	shelled, per quart	1	0	to	1	0
Cailliflowers, per doz.	1	6	to	1	6	Potatoes, new, per lb	0	1	to	0	1
Celery, W bundle	1	6	to	1	6	Radishes, per bunch	0	1	to	0	1
Chilies, green, per lb.	3	0	to	3	0	Spanish per doz	1	0	to	1	0
Cucumbers, each	0	3	to	0	3	New Jersey, per doz	0	0	to	0	0
Endive, per doz.	1	0	to	1	0	Shrub's, W bundle	1	0	to	1	0
Batavian, per doz.	3	0	to	3	0	Salads, W bundle	0	6	to	0	6
Garlic, per lb.	0	6	to	0	6	Shallots, W lb	0	6	to	0	6
Gousses, W qt	0	0	to	0	0	Spinach per bunch	0	4	to	0	4
Herbs, per bunch	0	0	to	0	0	Tomatoes, W doz	1	0	to	1	0
Horseradish, W bund.	4	0	to	4	0	Turnips, W doz	0	6	to	0	6
Leeks, per bunch	0	0	to	0	0	new, per bundle	1	0	to	1	0
Lettuces, Co. per doz.	0	0	to	0	0	Vog. Marrows, per doz	0	6	to	0	6
English, score	3	0	to	3	0						

The Legend?
THE WOLF OF THE MOUNTAINS



THE FARMER'S MAGAZINE.

NOVEMBER, 1877.

PLATE.

THE AGENT.

"—Light thickens; and the crow
Makes way for the rooky wood:
Good things of day begin to droop and drowse
While night's dark agents to their prey do rouse.

The Agent—Don't be alarmed, Sir, for ours is no black-whiskered gentleman, coming with a thundering rap to demand the rent, but an agent of the anti-over preservation of game society, who seldom makes his appearance before the shades of evening have set in to see if your farm is over-stocked. See how warily he creeps out of the thicket, stopping at every step to reconnoitre. What a conscience the rascal has, for the waving of a reed, the falling of a beech mast, or the rustling of a leaf startles him, and causes those short pricked ears to

work to and fro as if asking what's in the wind? And now a blackbird, alarmed by his stealthy movements, with shrill notes, darts from a neighbouring bush which is too much for Reynard's lightly strung nerves, and away he goes, as though it had been the sound of hound and horn, or he had caught sight of the "woman in white" "the old gentleman in black," "the golden farmer" or some other imaginary agent of the dusky night, which the oldest inhabitant, with solemn aspect and voice, still avers haunt the skirts of our village.

FARMERS' CLUBS.

BLANDFORD.

FARMERS' FOES.

The concluding meeting for discussion of the season by the members of this Club was held on October 20. at the Crown Hotel, Blandford, Mr. C. Cox-Bartlett in the chair.

The CHAIRMAN said Mr. Galpin had very kindly and at a short notice consented to bring forward a subject, and he must personally thank him for doing so.

Mr. GALPIN, after a few introductory remarks, then read a paper on "Some of the Farmers' Foes." He commenced by saying he did not mean to call their attention to a political question. Whether the men who advocated the repeal of the Corn-laws, or, on the other hand, those who stuck out for protection, were the farmers' friends or foes did not concern them then to enquire. He then proceeded: For my own part I have a very dim and misty idea with regard to the great question of those times. All I know is I was in favour of the repeal of the Corn-laws, because, being then at school, we were promised, if the Corn-laws were abolished, we should have a jolly tuck out with plum pudding *ad libitum*. We had the tuck out and we had the plum pudding, and I felt very ill afterwards. Neither would I call your attention to certain persons who go about the country setting class against class, and endeavouring to cause dissensions between employers and employed. I think the time will soon come when both parties will see it their common interest to pull together, and then the well being of the one will reflect itself on the other. But farmers find they have plenty of foes to contend with, or, if not exactly foes, they have in their daily occupations conditions to contend against, whether it be of climate or of disease, of blight and mildew, or the depredations of noxious animals and insects. Without going far from home we know farmers are considered to possess in an eminent degree the great characteristic of an Englishman—that of grumbling. Cowper, in describing the farmers at a tithe audit, says:—

"One talks of mildew and of frost,
And one of storms of hail,
And one of pigs that he has lost
By maggots at the tail."

OLD SERIES.

▲ ▲

But who has a greater right to grumble than the farmer? I have been with a party bent on a pleasure excursion, and a little rain has spoilt their fun. Oh, what sore grumbings have I heard! And yet what was it? Only a little pleasure delayed; whereas a day or two of rain sometimes causes a farmer's loss to be one or two hundred pounds. But, gentlemen, I thought by introducing this subject we ought to get a lively discussion, for it is one in which we are all interested, and each one can speak from his own experience. I propose, then, to call your attention very shortly to some of the insects which infest our crops, and we will begin with the turnip crop. After no end of ploughings, rollings, and harrowings, the application of artificial manures, and other expenses, no sooner do the young turnip plants appear above the ground than there is an enemy waiting to attack them and carry them off. Every one knows what the turnip fly is. I believe it is called by different names in different counties. The scientific name is the *altia nemorum*. I am indebted to "Curtis' Farm Insects" for any observations as to the economy of these insects, and I would strongly advise any farmer who has not this work to get it, as it is a most valuable contribution to entomology, and has besides the great recommendation of being a practical work written by a scientific and practical man in language specially adapted to practical men. Curtis said the female beetle, after hibernating through the winter, lays its eggs on the under side of leaves. These eggs hatch out into little maggots in about ten days. The maggots live about six days and then turn to chrysalides, in which state they remain about 14 days and hatch out into beetles, so that it takes about 30 days to complete the round of Nature, and thus one pair of insects may produce five or six broods in a season, and, as it is in the beetle stage these insects do the mischief, this will account for the fact that at certain periods during the summer they are more numerous and do more mischief than at others. Curtis gives any amount of remedies derived from practical experience of farmers, but none of them are more than partially successful. He recommends the destruction of charlock and hedge mustard and all cruciferous weeds in hedges, &c., as by these plants the beetles are kept alive till the turnips are ready for them. From my own experience I have found the fly is generally more active the latter part of

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May and first week in June, destroying our early rape, whilst swedes which have been sown about the 9th of June have escaped their ravages; and, again, in the last week of July and beginning of August I have found them very troublesome on the late young turnips. I believe we must look to proper cultivation of the land so as to produce a good fifth, the employment of plenty of artificial manure so as to force the plant out of the reach of the insects, as it is only on the catyledina or young leaves that the insect preys; and if we can get the plant in rough leaf it is comparatively safe. Alas, I think the sowing of a good quantity of seed acts as a protective. At the Bath Show this year I saw a revolving sort of fan for blowing the insects into a trough, where they were caught after the fashion of "Catch 'em alive, O!" Has any person seen it used? But the turnip, although it may escape its first enemy, has plenty more to contend with. There are several moths whose caterpillars feed on it, some eating the leaves and some biting off the young root; and I think for the destruction of these pests we must chiefly look to the aid of birds. The rook will eat the wireworm, but frequently he does more harm by pulling up the turnip plant to look for it. I had a field of swedes which was being eaten up by the caterpillars of the Dart moth; however, the peewits found them out, and so persistently stuck to them that they saved the crop. I remember also at the time I was living at Mr. Saunders', a small green caterpillar (*Geometra Xylotella*) was eating the leaves of the young swedes, when a flock of starlings came upon the scene and in a short time cleared them off. But the ravages of the caterpillar of the turnip sawfly, called the black palmer, are most to be dreaded. If we lose our young plants by the turnip beetle we may be able to sow again, but this demon of darkness comes when the crop is just arrived at maturity; after all the labour and trouble bestowed upon it he makes himself at home and takes what does not belong to him. The turnip sawfly (*Athalia spinarum*) is of a bright orange colour; and the female, which is furnished with a kind of small lancet, when about to lay eggs selects a turnip leaf, and, after separating the cuticle with the lancet lays its eggs in the interior; these eggs are hatched in about five or six days, and the young caterpillars soon begin eating. They eat so voraciously and grow so fast that their bodies get too large for their skins, so they cast them off twice or three times till they are full grown. Rooks will destroy the caterpillar, and swallows are very useful in catching the parent fly; but when the caterpillar is very numerous I have found ducks very serviceable in destroying them, only it is necessary to feed the duck on some grain as well, otherwise too many caterpillars will upset their digestive organs. We will now pass on to consider one or two insects affecting peas and beans. The first is a small beetle called *curculio* or *sitona lineator*. This little weevil, which is very difficult to see on account of its being of much the same colour as the ground, and also of its habit of falling to the ground and remaining motionless on the approach of danger, eats round and notches out the margin of the young leaf, retarding its growth, and if the beetles are very numerous, destroying the crop much in the same way as the turnip fly destroys the turnip. I do not know of any way of destroying these insects. But the most formidable pest of the pea and bean crop is the aphid, called also the dolphin. This is of the same family as the green fly, so abundant in our gardens and attacking nearly every living plant. The economy of these insects is so interesting that it will be worth our while glancing at it for a few moments. These insects are hatched in the spring of the year from eggs which have been laid the previous autumn. These are all wingless females, and they begin to produce young in ten or twelve days, which are also females, wingless, and as there are no males to be seen until the autumn, when pairing takes place, these females must be pregnant at their birth without sexual intercourse, and this occurs for several successive generations. About the middle of September the last generation, consisting of males and females, is produced. When they have attained maturity the sexes pair and the females no longer bring forth young, but lay eggs to be hatched in the succeeding spring. The wonderful fecundity of these insects is so marvellous that it has been calculated that from one egg only 729 million aphides may be produced in seven generations, so that, unless there were some retarding influences at work, everything on the face of the earth would be eaten up by them. Fortunately no tribe of insects has a greater number of enemies

than these aphides. Time will not permit our glancing at them; but I may say there are parasitic or ichneumon flies which deposit their eggs on the body of the poor aphid, and the maggots from these eggs literally eat up their host; but the most valuable antidote to the aphid is the ladybird. Don't ever kill one of these beautiful and useful little insects. The larvae of these ladybirds, which is an ugly looking beast, and which no doubt many of you have seen and know quite well, eats up the aphides wholesale, and in my own experience I have known a field of peas saved entirely by these larvae. There are other larvae which prey on aphides but our time will not permit us to notice them. Our corn crops are subject to a number of insect enemies, and prominent among them are the wireworms. These worms I believe live five years in the ground before they turn to pupae or chrysalides; these pupae are buried in the earth till they turn into small beetles called *elators* or *skip-jacks*. I will ask any one present to tell me how to kill or get rid of the wireworms, for I do not know. Just before harvest we sometimes find ears of several wheat stalks become prematurely ripe or perhaps the stalks break off above the root. This is caused by a fly called the corn sawfly depositing its eggs in the stalk, and the larvae arising from these eggs eat away the interior of the stalks, so causing it to shrivel up and decay. The larva buries itself in the stubble in the ground, so that the practice of paring and burning stubbles immediately after harvest tends to destroy many of our insect pests. There is also another fly, called *Cecidomyia tritici* (the British wheat midge), which lays its eggs in the husk of the wheat ear, and the yellowish little maggots which arise from these eggs feed on the corn and occasion frequently the shrunk corn we find in the ear. These little maggots are often seen in our barns in the chaff of the wheat, etc. Another source of loss to the farmer is that arising from the ear cockle or peppercorn. This is an abortive grain of wheat, consisting, instead of flour, of a quantity of worms, called *vibrices* something like the vinegar eel. The eggs are taken up in the sap from infected grains which has been sown and hatch out into these worms. The remedy of course is not to sow the infected corn. We have considered somewhat in detail those pests which prey generally on one particular crop. We have seen the turnip fly and the black palmer eating up our turnips; the aphides destroying our peas and beans, the wireworms, the sawfly, and wheat midge decimating our corn crop; but there is yet another pest which is not so considerate. He is an "omnivorous gatherer;" he likes everything. But we must speak low and with bated breath whilst considering his case. The others are *Ichneumonites*: their hand is against every man, and every man's hand is against them. But hares and rabbits are a peculiar people. Laws are made for their especial protection, and they can only be touched by certified means and by certified persons in strict accordance with the law. It will be useless, therefore, our discussing how to get rid of this pest without doing away with the laws which protect him. For my own part I think the damage done by pheasants—except in comparatively rare instances—is not great, and as to partridges, I believe they do more good than harm. But hares and rabbits ought to be, if not destroyed, at least kept down. We have far from exhausted the subject of the right of the farmer to grumble. To say nothing of blight and mildew, of rust and smut in our corn crops, the ravages which disease and parasitic animals cause in our live stock make the profession of farming to be not altogether that bed of roses which many people, not farmers, so fondly imagine.

The CHAIRMAN having invited discussion,

Mr. HENRY FOOKES said he considered Mr. Galpin had given them some very useful hints. He certainly could not understand as to the propagation of aphides—that was a mystery he could not fathom. There was one thing which he would like to know, and that was as to the cause and prevention of club-rooted turnips. He had hitherto thought chalk was a preventive, but never before had he so large a proportion of his turnips club-rooted as this year, and even on a new formed border, which the reformatory boys came and cleared not, and which was entirely new ground, the same thing occurred.

Mr. OWEN RICHARDS said so far as his experience went, chalking the land was a preventive to club-root, but he had tried mixing a small portion of quicklime with the artificial manure he used, and found that was useful. He considered

the best preventive of wireworm was clean fallowing, and if a little salt was put with the manure between the drills, though the salt did not destroy the wireworm, yet that insect did not like it, and it would do good. He heartily thanked Mr. Galpin for his lecture.

Mr. H. BARRETT thanked Mr. Galpin for the able way in which he had introduced the subject. He thought the best way to prevent the black jack carrying off the turnip was to put the seed in directly after ploughing. One of the greatest pests he had were the sparrows. He had several acres where only the chaff of the grain was left, and he called them one of his foes. No doubt they did good, but they might have too much of even a good thing. It was all very well to stop the destruction of birds to some extent, but they might so increase as to do more harm than good.

Mr. R. LEWIS said until this year he had not sown turnipseed a second time. Could Mr. Galpin or any one present tell them the best way to get rid of the turnip fly? With respect to club-root, he had on a piece of new land both swedes and rape. He found the rape got to what was known as fingers-and-toes, but on land which he had chalked all over he had no club-root. He could not understand how it was Mr. Fookes' land after chalking produced club-root turnips, except it was that the land was very sour. On such land he did not believe chalk was of any use.

Mr. C. POPE said he quite agreed with Mr. Lewis as to the value of chalk. On a piece of land of 60 acres which he had chalked he had a good crop of turnips, whilst on that not chalked there was a failure.

Mr. LOHN SCOTT said he was much pleased with the remarks of Mr. Galpin, and as to the various insects which infested their crops, he had no doubt they were much increased by hedgerows not being cut clean. With regard to the peppercorns, he could not understand that the worms would grow and produce peppercorns another year. As to wireworm, he thought that rapecake used on land would kill that insect. He could not say in what way, but he believed rapecake did kill wireworm.

Mr. H. FORD said he did not consider rapecake was of any use to destroy wireworm. He had tried it to no purpose. His idea was that having the ground well cleaned was the best preventive. With regard to the use of chalk to prevent club-root in turnips, he considered it very good. He did not consider clearing out hedgerows would make much difference as to the number of insects.

Mr. SCOTT wished to add that he had a piece of down land which was sown with mustard, and he never afterwards was troubled with wireworm.

Mr. J. FOWLER thanked Mr. Galpin for the excellent paper he had read. He thought at the present time the bother with the labourers was one of the greatest evils farmers had to contend with. As to club-root, he found lime and chalk the best thing to prevent it. With regard to peppercorns, which he called "cheat"—

Mr. GALPIN: Pepper corns are not cheat. It is a different thing altogether.

Mr. FOWLER was not aware of any difference, nor was he aware there was any fear of the next crop by sowing wheat with them in.

Mr. GALPIN produced one, and stated the corn was full of worms, and if any considerable quantity was sown with the wheat, all that must be lost, as though the outside shell shrivelled up, the insect remained.

The CHAIRMAN remarked he did not think Mr. Galpin had informed them what became of the turnip fly.

Mr. GALPIN: After placing their eggs on the inside of the turnip-leaf the fly dies.

Mr. COX-BARTLETT said when at Normanday Farm he chalked a great deal, putting 180 bushels to the acre, and he found it a good practice to put chalk in the hedgerows. Once or twice he put in two bushels of salt to the acre, but did not find that made any difference. At one time he tried rape cake, and found the wireworm fed upon that, and whilst so feeding his turnip plant grew and he saved it. He quite agreed with Mr. Barrett as to sowing turnips soon after ploughing, and he generally had a good crop.

Mr. GALPIN, in reply to the observations of the speakers, said some persons used the roller over the turnip for the purpose of getting rid of the fly, and he thought it a good plan, as it disturbed the insect, and another plan was to sprinkle a

little dust on the plants. He then referred to the use of Paris green in America to destroy the Colorado beetle, but he considered its use most dangerous, as it was a composition of arsenic and copper. As to the black palmer, some advocated the cutting of a trench which they could not get over. As to the club-root referred to by Mr. Fookes, he inquired if he had examined to see if there was not a grub in it.

Mr. FOOKES said he had not.

Mr. GALPIN said they might sow turnips many years and not have club-root. It depended on the weather. If they had a wet spring and then a continuance of dry weather they would find club-root. Chalking the land might do for turnips but it would not do for mangels, as it turned them black. The question of sowing directly after ploughing was simply one of moisture. As to peppercorns, if they cut one open they would find it full of worms, and each worm was full of eggs. It was not these peppercorns falling into the ground which did the mischief but the worms which were enclosed in them.

He thought carbolic acid would be one of the best things to keep off the flies, and he should certainly say rape cake also was good, as whilst eating it the young turnip grew. Mr. Small, of Snapwick, told him on his down land he used a great quantity of soot, and he found great benefit from it. With respect to small birds, though as to some species they might be considered the farmers' foes, yet he believed starlings were the best for destroying insects, and linnet and goldfinches did a great deal of good. He hoped his brother-farmers would warn those men off their land who come from London to catch these birds.

Mr. H. FOOKES, in proposing a vote of thanks to Mr. Galpin, expressed a hope that as he had not exhausted the subject he would continue it another year.

Mr. R. LEWIS seconded the proposition.

On the motion of Mr. GALPIN, seconded by Mr. H. FOOKES, Mr. John Friend was unanimously elected to fill the office of vice-chairman, vacated by Mr. John Ford.

This concluded the business.

IXWORTH.

The autumnal meeting was held on October 24, when there was the usual show of roots, corn, &c. At the dinner, Mr. HUNTER RODWELL, M.P., alluding to the legislation of last Session, said: The Prisons Bill had been passed, but the other two measures in which he was deeply interested, the Valuation Bill and the Highways Bill, had been kept back by the persistent interference of the Irish gentlemen. He hoped that the Government would, however, be enabled to carry them through in the coming Session. If he could not congratulate them upon the harvest and upon the turn that agriculture had taken, he could congratulate them on the fact, as stated by Mr. Read, that they were one year nearer the good time. There was one consolation, that the bad prospects were general. He hoped the House of Commons would devote itself to the passing of measures which would secure the agricultural interests that "protection"—he did not like to say the word—which they were entitled to, from foreign disease being imported into the country. He hoped the next Session would see some scheme for putting the control of the highways, coupled with that of the valuation, into the hands of some County Board. There seemed to be a desire to centralise everything in London. He did not think it was at all satisfactory, for he was a believer in the utility of County Boards. Referring to agriculture, Mr. Rodwell said he believed it it would be in the end remunerative; and he did not see any reason why they should not look forward to a favourable season, which would remunerate them for the capital and labour they had expended.

Mr. W. MANFIELD spoke of the aversion young men had to farming pursuits, mentioning the fact that five young farmers around him had given it up recently, and sold their farms. At Framlingham School a farmer's son could get as good and useful an education as he could wish to obtain from any school or University in England, and yet it did not cost any more than the amount necessary to take 100 acres of land; such being the case, he did not anticipate that so many farmers' sons would be brought up to farming pursuits.

The CHAIRMAN, Mr. E. Greene, M.P., said he had marked the successes of the Club with pleasure, but he could not have assisted in achieving that success if he had not been so well

backed up by many gentlemen of the Club. He thought the Club was a good thing for the members and for the surrounding neighbourhood. Referring here, at some length, to statistics of the various crops, Mr. Greene gave the leading facts, contained in the account and result of Mr. Lawes's experiments, speaking highly of that gentleman's experience. Mr. Greene said he did not agree with Mr. Lawes that the higher price of wheat would decrease the consumption. In a few words that passed between him and Mr. W. E. Forster, M.P., it was remarked how peculiar it was that an increase in the cost did not lessen the consumption. It could not be expected that they could always have the atmosphere favourable for them, but the present autumn was one of the best they had had for the cultivation of the fallow lands, and he was glad to see that some gentlemen were entering upon that work with energy. Coming to the question of heavy lands, Mr. Greene expressed his opinion that turrips should never be grown upon heavy land. As to the labour question, the mind of the agricultural labourer was evidently improved; for whereas in former times the advent of a machine was in many places the signal for a riot, now it was quite different. He had never been an advocate for low wages, and he had always maintained that the farmers could afford to give a good wage if they got a good day's work for it, but not without. If the farmer suffered, the labourer felt it ultimately. They heard strong feelings existing against foreign workmen, but he who was for free trade in corn must be for free trade in the labour question also. He believed that the best plan to pursue with mangels was, if possible, to manure the land before Christmas. He should like to see them endeavour to get a good description of wheat or of seed corn: he himself believed in carefully-selected seed corn, as being by far the best to sow. They did not breed the kind of sheep he liked, and he strongly urged them to breed the half-bred ewes. He was glad to see the butter so good, and he was pleased with the ploughing. In concluding a lengthy speech, Mr. Greene impressed on all young men starting as farmers to give their personal attention to the business, and especially to gain an insight, however small, into machinery. It was also preferable, when possible, to have a covered yard for stock.

SEVERN VALLEY.

CROP ESTIMATE.

At the annual meeting of the Club, held at Alveley on the 16th Oct., Mr. Robert Woodward, of Arley Castle said that when he entered the parish of Alveley that morning, and was conducted to the barn where the corn was shown, he was quite prepared to condole with them on the utter failure of this year's Show. By a foregone conclusion he had thought they would have had no corn fit to exhibit; that not only would it be wanting in quantity, but that in quality it would be most defective. Let them judge therefore of his surprise upon entering the barn to find no less than 26 samples, and he would venture to say that at no agricultural show in the United Kingdom, what over the county and however favourable the harvest, could seven samples of red wheat of better quality be brought together that season than those at their Show that day. He should bestow equal praise on the four samples of white wheat; they were unexceptionable in quality and, as well as the red, were the best he had seen this season. Now they were probably not aware what estimation the crop of English wheat of the present season was held in by millers in the North of England. He happened to be in Liverpool for a few days about three weeks ago, and he was quite surprised and chagrined at the remarks which the millers made in disparagement of the quality of the late crop of English wheat. One miller said to him "Don't talk of your English wheat? give us some of the American new wheat. I have not touched a bushel of English wheat since harvest, and I don't intend to have it." Now to have the misfortune to grow an inferior quality of wheat, or to have it damaged by the harvest as has been the case this year was bad enough, but to be laughed at as well made the trouble very difficult to bear. But with respect to what he had just said, he thought a flat and complete denial would be given to the observations of the millers who attended the Liverpool market, and who so utterly despised the use of English wheat in the present season, by what had been brought together at the Show that day. With regard to the other grain, there were eight

samples of barley and four of oats, but he must confess he could not speak in the same degree of praise of the samples of barley. When they remembered the season in which it was harvested they could not wonder at the loss of colour, nor that it would not bear comparison with many previous years in quality. Mr. Woodward then went on to say:—Most of you are aware that it has been my practice for some seven or eight years, having attended the meetings of the Club for the last nine or ten, to enter somewhat into the statistics of the produce of the country at large, and to show you how dependent we now are upon foreign nations for our supply of food. I will, with your permission, enter a little into a calculation as to what our prospects are. I will, however, first of all inform you that the average price of wheat in England for the 52 weeks ended 1st of Sept. last was 54s. 11d. per quarter, as contrasted with 45s. 10d. per quarter of the previous year. Thus the price of wheat in the twelve months ended 1st Sept. 1877 was on the average of the whole year 9s. 1d. per quarter higher than in the previous year. That you all lost money to a serious extent in consequence of the low prices that prevailed for the two years previously I am well convinced from my own experience. The average prices of barley for the past year has been 3s. 9d. per quarter above that of the previous year, and if I take the thirty-four weeks in which malting barley is sold you have got for the barley crop during those thirty-four weeks just 5s. per quarter more than you have for the year ended 1st September, 1876. You will bear in mind that last year we had an excellent quality of wheat, throughout the whole of the midland district, and I may say, that throughout England the quality of the wheat was good, especially that which was first harvested, while about a third of the crop of barley last year was much injured by the weather which in some degree affected the price, for a portion was not maltable. It will also be in the recollection of many present that, in my calculation of the crop of wheat last year, I hazarded the prediction that we should require to meet the consumption of the country an importation of 11,500,000 quarters in the shape of wheat and flour. I can now inform you that we got not only 11,500,000 but 12,300,000 quarters, and yet I will venture to say that we have begun the present cereal year, which with merchants usually begins on the 1st of September, with considerably less wheat—British and foreign—than we had a year ago. It is seldom that a sample of English wheat of the growth of 1875 or 1876 is now seen, and therefore I think I am warranted in the conclusion that we began the present year with a much less stock of old wheat in hand (notwithstanding the importation of 12,300,000 quarters) than we had at the end of August, 1876. What are our prospects for the future? It is of the greatest moment to us that we should form some calculation as to what our own produce has been, how far it will go to feed our enormous and growing population, and therefore how much foreign aid we shall require. I will give you my own estimate, although I differ from many well-informed gentlemen present. I shall probably astonish some of you, after what you have seen to-day, when I express to you my confident belief that we have not had so defective a harvest in England since 1860 as we have had in the present year. I have received advices from many quarters, and from many counties of the crop of wheat in England, and it was disappointing in almost every county I have heard or read of. I would inform you, from statistical returns which the President of the Board of Trade has done me the honour to send me, that we have had under wheat cultivation in Great Britain and Ireland 200,000 acres more than in 1876. My estimate is as follows:—After allowing a little increase on the statistical returns of the Government, for there may be seen some small omission in almost every parish, we have under wheat cultivation 3,340,000 acres, and my estimate of the produce this year is 21 bushels to the acre. Now, putting the crop at 21 bushels to the acre (which is seven Worcestershire bags) and the acreage at 3,340,000, you will have a crop of 8,767,500 quarters. I have to deduct for seed wheat for the ensuing crop 947,500 quarters—I put it at 2½ bushels to the acre—and that leaves us with 7,820,000 quarters for consumption. I also deduct for its inferior quality (for last year I had to add something on account of the superior quality), three per cent. or thereabouts, and this will further reduce the quantity by 235,000, leaving for the actual consumption of the country 7,585,000 quarters. This, according to my estimate, will leave 14,915,000 quarters to be provided from abroad, or nearly 3,000,000 quarters more than we have

ever imported in one year, except the year before last. Now this is a very serious state of things—that we should be dependent on foreign nations for nearly 15,000,000 quarters of wheat when we ourselves produce for consumption, as in this season, less than 8,000,00 quarters. Let us put our shoulders to the wheel and see if we cannot alter that state of things. I am persuaded from experience—and I have farmed 400 or 500 acres for a considerable number of years—that since 1868 we have been retrograding in the quantity of wheat we produce to the acre. I am willing to admit that the seasons have had much to do with it; we have been most unfortunate in weather as we have had in the west midland district for the last seven years. In this period there have been six defective crops, and only one good one. In 1871-72-73 the crops were more or less defective in these parts; in 1874 the crop was good, but in 1875-76-77 they were very defective, and the most defective of all I take to be that of the present season. I believe I rather underrated the produce of last year, but there were several circumstances which militated against the verification of my calculation, and I will tell you what they were. You will remember that we had an unusually mild winter, that vegetables were plentiful, potatoes abundant and cheap and exceedingly good in quality. Therefore, the crop of 1876 held out rather longer than I anticipated, and yet very little of it remained on the 1st of September for consumption. With regard to the foreign supply, I have no doubt we shall get it, for the United States of America, particularly the Western States, have never within the memory of man had so good a crop in quantity or in quality. As early as the month of August new wheat began to arrive from New York, Baltimore, and Philadelphia in small quantities, and it was in consequence of this that prices have been kept down. Some of you will ask me, "What are we to do with our present crop?" I advise you not to part with your wheat at the present time, and for more reasons than one. In the first place, it is not in a condition that the miller can afford to give you its intrinsic value. You would be selling wheat at 4s. per quarter which ought to bring you 5s., but if you keep it that discrepancy will right itself—you will get your wheat dry, and obtain a fair value for it. I should inform you that, owing to the abundance of the crop in America, speculators took upon themselves to sell a great deal of wheat to deliver to merchants in Liverpool and London; they sold largely at 4s. 6d. and 5s. per qr., delivered at outports, or ports of call, as they are termed. Now they soon found out their mistake, and they have to a very considerable extent paid 5s. per quarter to cancel some of the contracts. The Americans are a sharp-witted people, and they will not let us have the wheat, knowing we require so much, at any price our millers choose to give. I believe they will in the course of a month or so cease to ship much at the present prices, and I feel confident I do right in recommending you to hold your wheat, at all events until it is in better condition, and until it is seen what aid America is willing to afford us at present rates. That you will do better with your wheat some months hence I feel quite persuaded, and for the reason that it is not in a condition for the miller to use it advantageously. Now I will say a word or two as to barley, which, as a whole, is a better crop than wheat as regards quantity, but I think as regards quality it is rather worse. The acreage under barley in the present year is 110,000 less than it was last year, whereas the acreage under wheat is about 200,000 in excess of last year. A portion of the barley of this season is rendered almost unfit for malting by the excessively wet weather after it was cut. A great deal must go for distillation which, had it been better saved, would have gone to the maltster, and therefore choice samples of barley will, I am persuaded, fetch a high price. Now, most of you know that for three or four years past I have insisted at our annual meetings upon the policy of your endeavouring to grow more barley at the expense of wheat—that you were almost certain of your return from barley if you used a first-rate seed, and that in the long run you would profit more from the cultivation of barley than from wheat. One or two circumstances have induced me to modify that opinion, and one is, that owing to the short crops we have grown of straw, and its increasing demand, it has become much dearer than it was a few years ago. As a land-owner myself, and I believe I express the opinion of other land-owners here, I think that in regard to our agreements with our tenantry some modification is now really called for as to the sale of hay and straw. Far be it from me to advocate

the robbing of the soil, but I do think the time has arrived when, owing to the great advance in the price of straw, and the difficulty of obtaining it by townspeople, we ought to somewhat relax the restrictions placed upon its sale. At the same time let me on no ground depreciate, but on the contrary let me encourage, the laying out of more money in good artificial manures both for your corn crops and your grass lands. With regard to our corn supplies, a new source has been opened up within the last two or three years, and to a very considerable extent. British India will afford us this year about a million quarters of wheat, to the surprise of almost everybody. The quantity of wheat shipped from Bombay and Calcutta is astonishing. We shall not have nearly the quantity from California we had last year, but that deficiency will be made up by other Western States of America; and at some price or other I have not the least fear we shall be fed to the full extent of our wants. I have little else to say to you. I have honestly expressed my convictions, and if you deem them of any value I hope you will act upon them. Mr. Woodward concluded by thanking the company for the compliment they had paid him as a donor of prizes.

FRAMLINGHAM.

ANNUAL MEETING.

The annual meeting was held on October 19, when there was the usual display of corn, roots, poultry, &c., and a ploughing match. At the dinner the chair was taken by Mr. Goodwyn-Goodwyn, Mr. F. S. Corrance, the President being absent. Mr. Corrance was re-elected as President for the ensuing year, and the Rev. W. Bird and Mr. G. Gooderham Vice-Presidents. Colonel Barnes, M.P., the Chairman, Mr. Jeaffreson, and other gentlemen made speeches, which were, however, chiefly of local interest.

ALLEGED REMEDY FOR HYDROPHOBIA.

The following letter appeared in *The Times* of Tuesday October 23:—

SIR,—The letters recently published on this subject, which has engrossed public attention for years, without any satisfactory result having been obtained, have attracted my attention, and I consider it my duty to point out a remedy which has been tried with success in the case of a Coolie servant of a friend of mine in China. The man was bitten by a rabid dog, and sixty days after the mishap fell ill and showed indubitable symptoms of *canina rabies*. My friend took a handful of the leaves of *Datura Stramonium*, or thornapple, boiled them in a pint of water till the mass was reduced to one-half, strained the fluid through a fine white cloth, and administered it in one dose. A difficulty here arose, as the man showed the greatest aversion to water, and pretended that he could not swallow. Nevertheless, it was forced down his throat. The drug operated before long, and a violent paroxysm ensued, accompanied by copious perspiration. The patient fell into a profound sleep of eight hours' duration, and when he awoke the symptoms of *rabies* had left him. It is only three years since I became acquainted with this specific, which might have done good service in the case of a young lad whom I tended in 1872, and who died from hydrophobia. I had to hold him down in his bed during many hours, and never can I forget the agony the poor youth suffered until death relieved him of his misery. In spite of the vapour baths which were repeatedly applied with a view of making him perspire, his skin remained dry and parched, his tongue frequently protruding. Is it possible that *Datura Stramonium*, by causing "copious perspiration," was the cause of a radical cure? In Africa hydrophobia is unknown, at least I have never heard of a single case during my travels extending over two years.—I am, sir, your obedient servant,

CH. KROLL LAFOURTE.

Birkdale-park, Southport, Oct. 20.

CHAMBERS OF AGRICULTURE.

DEVON AND CORNWALL.
TENANT-RIGHT.

As briefly reported last week, a meeting of the Devonshire Chamber of Agriculture was held on October 19, at Exeter, and the members were met by a deputation from the Plymouth Chamber. Sir L. Palk, M.P., presided.

A letter was read from Mr. Henry Clark regretting that an unexpected call to Plymouth prevented his being present to-day. His opinion upon the question was unchanged. He still thought that when a tenant was quitting, and was not by lease or agreement entitled to recover the value of his unexhausted improvements, it should be secured to him by compulsory legislation.

Mr. PRATT, of the Plymouth Chamber, in introducing the question, said he had long been anxious to have this question ventilated, because he thought it far better that questions of national importance should be discussed in public rather than in private. And when they met he thought it well that tenant-farmers should speak out fairly, clearly, and respectfully on these points. He had endeavoured to do so through life, and from landlords as well as others he had always received the most respectful consideration. This question was not one between the landlord and tenant alone, but it was a national question. It involved an extra supply of food for the nation from home sources. If security were given the supply would, according to Mr. Sewell Read, be increased by one-fourth. That he thought a very moderate estimate. He thought the present time eminently suitable for bringing this question forward, but if they took agriculture throughout the breadth and length of the land they would find it in a depressed state, and many farmers had great difficulty in making both ends meet. If they referred to agricultural statistics they would find that within four years the cattle, sheep, and other stock held by the tenant-farmers had decreased by at least six millions. He did not think good citizens or true patriots would allow this to pass without asking what had caused this reduction in the capital of the tenant-farmers. Many landlords had returned ten or twenty per cent. of their rent to their tenants, but though this was generous, yet he did not like the idea, because he thought a man should hold his farm on such terms that he could meet the times of depression by the fruits of the days of prosperity. Looking at the matter politically, he believed that if they had throughout the country a class of men farming their estates and knowing full well that they would reap the reward of their skill, there would be a far better class of citizens than now. They would have men with a stake in the country, and their support would be based on a far firmer basis than now. He remembered an old friend of his giving this advice to his sons and sons-in-law: "Remember always to farm as a lodger." Consider for a moment the state of things this produced. A man farming as a lodger would be ready to leave his farm at six months' notice, and there would not be much chance of getting anything out of the land as he left it. When farmers complained, it had been suggested that they should join Joseph Arch; but he hoped everyone would be careful how they gave or received such advice, because it meant nothing more or less than revolution. There had been other recommendations for the correction of the mischief. Some said it would be better to have small farms, and then they would have no difficulty about labour. But in a very remarkable address by Mr. Caird, at the Social Science Congress, it was shown that, although in France there were a very large number of persons farming under ten acres, yet they were almost starving, and two acres of French land did not produce as much as one acre of English land, whilst the French population instead of increasing, as did the English, to the extent of 300,000 annually, was almost at a standstill, if not going back. This was most conclusive evidence that small farms would not cure the mischief. He was there to advocate compulsory law for giving the tenant farmer security. If a farmer was sure that, when he grubbed up a brake, tamed a crooked edge, or drained a wet piece of land, he would be paid for it, much of that kind

of work would be done that was now left undone. The tenant farmer could do this work much cheaper than the landlord. He knew a case where the landlord did all this sort of work. But his men worked on the principle that they were working for the landlord, and so did the horses. If the landlord gave £50 or £60 for a horse accustomed to walk four miles an hour, before it had been on the estate a month it would only walk two miles. When the Agricultural Holdings Act was carried through Parliament the difficulty arose of bringing it into operation. How they could best apply its provisions if the Act was made compulsory was a lesson that had to be learnt. His friend Mr. Perry had suggested that Boards of Arbitration should be allotted to various districts, who should make these districts their study and understand the real value of improvements. He believed they must come to this. Many asked, "Why do you require this Act when many landlords are giving all we require?" It was true many did, but there were bad landlords as well as good, and they wanted to make the bad ones act as did the good landlords. He would give an instance of the effect of want of security. A tenant had spent much in improving his farm, and he was asked to give £30 a year more rent. He felt that he could not do so, and he left. Another man took it at the advanced rent. What was the result? In three years he was sold up, the farm was put into the market, and then it had to be let at £60 less than before. It might be said that this was a rare case. But it was these rare cases that afforded a ground for doing something. These cases were beacons and warnings, because others, seeing how this man was served, said "I'll be careful not to do as he did—I'll farm as a lodger." He might be asked the reason for bringing this matter forward now, and what would be the tendency of it? He would tell them. A general election was not very far off. He had not the slightest doubt that if at the next election the tenant farmers spoke out strongly and firmly they would find the candidates ready to give them full security so that they might develop their farms and produce a greater quantity of food for the people. He had a word to say about the Game Laws, because he did not see how they could be divided from the land tenure question. These laws were in a very unsatisfactory state. He did not say there should be no such thing as game. He was fond of sport, and hoped that every gentleman who came over his land would always find plenty of work for his gun. But there should be a law defining where the tenants' right ended and the landlord's began. [Voice: "Kill the rabbits."] It was not right that a man should grow a crop and then have it destroyed by a lot of vermin, and have no fair amount awarded him for the damage done. Unfortunately the landlord too often listened to the gamekeeper, whereas experience showed that his veracity was not to be relied upon. Last Session there was a law passed for Scotland, and he should like to see it adopted for England. It provided that every landlord when he granted a lease should insert in it the amount of damage he expected to be done by game, and whatever damage was done beyond that amount the landlord was liable for. Thus if £50 was inserted, a man in tendering for the farm knew what he had to expect. If no clause was inserted the landlord was liable for all damage above 40s.

The CHAIRMAN—Forty shillings for what—per acre?

Mr. PRATT—Whatever damage is done above 40s. he has to pay for.

Mr. ACLAND: Irrespective of the size of the farm?

Mr. PRATT said he understood so. The tenant farmer of England was in competition with the whole world. Other countries sent us their beef, mutton, and corn. He rejoiced at this because he did not doubt that the energy of the British farmer would enable him to cope with this competition; but they must let him start fair, and not weight him with absurd restrictions, and must not curb his energy and stagnate his skill by telling him that if he laid out money in improving his land he would have to pay for it. He had no doubt as to the result of the race if they only started the British farmer fairly. He moved, "That the absence of all legal security to the tenant farmer for his outlay in improving the land is the cause of serious diminution in the home supply of food to the

nation, and these Chambers therefore determine to use every effort to procure the enactment of a compulsory law, fulfilling this much-needed requirement."

Mr. J. HORSWELL, sen., formally seconded the motion, with much pleasure.

Mr. URCOTT having expressed his satisfaction at the introduction of this question,

Mr. B. FULFORD thought that the motion involved the dangerous principle of interfering with the rights of property. He felt strongly that the tenant's interest should be protected, but the question was, what were the tenant's interests as regarded the general public and the landlord? He thought it would be a pity to come to a decision too quickly. He knew that a large number of the tenants of this country would be sorry that the excellent feeling now existing between them and their landlords should be severed by any encroachment, and an idea be encouraged that they had no respect for their landlord, and could not as a general rule rely upon him. (A voice: "You cannot always.") As to the Agricultural Holdings Act, if the tenants looked to that for a protection they looked to a shadow, for there was no protection in it. It recognised the principle that the tenant should be protected, but yet the Act itself was powerless. If there was legislation, it should be decisive, clear, and simple, and should require the land to be cultivated in the interest of the general public, and on the principle that it should produce the largest results. Legislation was required to secure the largest amount the land could produce, but to ask for legislation only on the ground that it was required between landlord and tenant was a dangerous thing. But on public grounds he did think all interest invested in the soil by the tenant should be recompensed to him by positive legislation.

Mr. CLAFF said it was true—and he did not doubt it, knowing the authority on which it was mentioned—that a man might be eaten out by game without obtaining sixpence compensation, or might be turned out at six months' notice without receiving any compensation for what he left on the farm, and he should like to hear some explanation in defence of the continuance of such a state of things. He learnt from a discussion at the Farmers' Club that the majority were in favour of compulsory powers, and as the Agricultural Holdings Act was permissive, they did not regard it as worth anything. People who ought to have been the first to place themselves under the Act were the first to contract themselves out of it. As to freedom of contract, it seemed that the freedom was all one side. A tenant must either contract on the farmer's terms or take himself off the farm altogether. Tenant farmers were reluctant in explaining their views, but if they could get at them there was no doubt they would find them in favour of compulsory enactment. He gave credit to the great landlords for doing well, but there were some who would not do justice to their tenants, and the result was that the latter were put to great inconvenience and loss. If an Act could be passed which would induce the tenant to put all his capital into the land both the consumer and the landowner would be placed in a position of very great advantage.

Mr. C. ACLAND said he did not pretend to have any knowledge of the subject, as he had had no actual experience. He wished, however, to make one or two remarks on points on which he did not agree with previous speakers. As to the French farming, his impression was that Mr. Caird's remark did not apply to small holdings by tenants, but rather to the numerous small properties in France which were farmed by the actual owners. He did not think the difficulty raised could be settled by an arbitrary rule as to large or small farms. The expediency of large or small farms depended mainly on the nature of the country in which the farm was situated. There was this feeling in his mind, which he had never been able to get rid of—that any law dealing in a compulsory manner with the arrangement of a particular kind of contract would be contrary to the principles of Free Trade. This he distinctly dreaded. He believed that if they tried to interfere between two parties in a contract they would be sure to be beaten sooner or later, for the parties would find out sooner or later what was most to their own interest, whether they were legislated for or not. He believed the Houses of Parliament did a very wise thing in passing, as far as they could, an Act giving an expedient direction to the tendency of contract. After very considerable and careful discussion they laid down certain general principles which might be taken to apply in a general way to English farmers; but it

was almost impossible to imagine a compulsory Act which would work satisfactorily throughout England, the circumstances of farming being so different in different parts of England. There was another consideration which must have some force. It was this—that if the nature of the occupancy was really changed, its value would be changed, and sooner or later it would adjust itself. It was now found that a certain amount of capital available for the cultivation of the land was devoted to it, and statistics had shown that in certain circumstances, which did not include the insecurity of tenure, the amount of capital had increased. The rise of wages had far more to do with the increase of grass land than the insecurity of tenure, though as far as he knew the laying down of grass was one of those improvements for which security was most wanted. It seemed to him that they must chiefly look for improvement—which he quite admitted was necessary—in the nature of the contract between owners and occupiers. It had been said that freedom was all on one side. He agreed with this, but in a sense different from that of the last speaker. He thought that it would be generally admitted that the property of the landlord was fixed; the property of the tenant was not, but he was free to put his capital where he liked, whilst the landlord could not move his land. He did not wish to oppose the tendency of the motion, but the dogmatic assertion that compulsory law was the only thing that would meet the case, he should oppose.

Mr. ROACH thanked Mr. Pratt and his friends from the Plymouth Chamber. For forty years this question had been before the public, and at last they had the Agricultural Holdings Act held up to them; he would not say it was an insult, but he thought the only effect of it would be political. As a rule farmers did not say all they thought, but like the untalkable parrot, they thought all the more. When the time came to put their hands into the ballot-box at the next election they would ask themselves a few questions as to who were their friends, before they decided for whom they would vote. For several years past the tenant farmers had been looking for some security. He could not say they expected much from a Liberal Government, but they did expect something from a Conservative Government. The farmers had asked for an egg, and in return the Government had given them a stone, or something very much like it. When they came to vote again the tenant farmers would show their power. This Agricultural Holdings Act was a mere sham. They did not want laws for good landlords, but in all classes there were dishonest men—men who did not do as they would wish to be done by. Some landlords would endeavour to overreach their tenants. The disposition of the law should be for the general public. They wanted a just law between man and man. If all were like the Chairman these laws would not be required. They might depend that it was to the landlords' own interest to be liberal, if they only knew it. A liberal landlord secured good tenants. However, it would be for the good of the public if a real Compulsory Agricultural Holdings Act were passed. It was not dealing on true commercial principles to place blind confidence in any man. If the land was properly managed with security of tenure, and the game kept within fair limits, the produce would be increased by one-third. This country depended so much upon foreign supplies, that if at war with other countries we should be in a very serious position. His idea was that the country should—and it would under proper management—produce sufficient food for its consumption.

Mr. MOORE-STEVENS said he came here without knowing what subject was to be discussed, and the conclusion he drew from what he heard was that landlords and tenants were to be the only persons in this country who were not to be permitted to make contracts between themselves. That was the logical conclusion of compulsory legislation in this matter. Compulsory legislation was directly against what he had always been led to desire—freedom of contract with proper restrictions. From the discussions in Parliament they learnt that no one had yet been able to draw a lease that would suit all parties. The Agricultural Holdings Act they must take as far as it went. It was the only Act that had been brought forward by any party acknowledging and settling that there should be satisfaction to tenants for what they had in the land. Speaking to Lincolnshire farmers, he found that they would not have leases—they went by their customs. There was an agreement as to going in and out, and he believed that was the best way

of dealing between landlord and tenant. However, as to the Agricultural Holdings Act, that provided what compensation a man was to have in the absence of any special agreement to the contrary. Supposing there was no agreement, the Act said he was to have compensation. It might not be proper compensation, but it laid down the principle, and they must accept it until they could get something better.

Mr. MORTIMER said on previous occasions he had very strongly advocated compulsory legislation, and he had seen no reason to change his view. The Agricultural Holdings Act was to a great extent inoperative. He did not take quite so gloomy a view as some speakers of the future, because the other day he read the speech of the chairman at Colyton, and he regarded it as the most liberal and encouraging speech he had ever read, and one that nine-tenths of the farmers in this county would readily endorse. After having such a speech from one of their representatives of this county he thought they might hope in the future to have something more substantial than the Agricultural Holdings Act. If this Act conferred, as Sir L. Palk said, greater benefit on the tenant farmers than any law he had ever seen, why was it not made compulsory instead of being merely permissive?

Mr. HORSWELL said he was very glad that this matter had been discussed. Still he was in great confusion about this Agricultural Holdings Act, because he found the speeches of the senior member for East Devon and that of the tenant farmer member for Norfolk to be directly opposed to each other. Sir Lawrence Palk said by this Act every shilling the tenant farmer expended was secured to him, whilst Mr. Sewell Read said that the Act did not secure sixpence to the tenant farmer. As there seemed to be such difference of opinion between honourable members of the Legislature, it appeared to him that the matter wanted further ventilation. He had been struck with several remarks during the discussion. It had been said that the demand for a compulsory Agricultural Holdings Act interfering with contract was unparalleled in the history of this country. He was quite at a loss to understand it when it was said there had been no such demand for any other interest. He had been in the world several years, his hair was getting grey, and had he made notes he thought he could have mentioned at least ten Acts of Parliament that did not allow individuals to make contracts just as they pleased with one another. He should like to know if the shipping interest had a right to use and load their vessels as they pleased? Could the agriculturist or the manufacturer employ his labourers what hours they pleased? Could parents contract to send their children to work instead of to school? He was not in the habit of making speeches, but he could not sit and hear the things said that had been uttered by some speakers without feeling stirred at remembering that they came from those who they had reason to believe knew better than the statement they made.

Sir LAWRENCE PALK thanked Mr. Pratt for the able manner in which he had brought up this matter. Though he could not quite agree with the resolution and with many of the sentences he had uttered, yet he went with him thoroughly in saying it was for the benefit of this country that the tenant farmer should have full and absolute security for any improvement, and for the unexhausted manure there might be on the estate. So far they were quite in accord. He must take the opportunity of thanking the gentlemen who spoke so favourably of his speech at Colyton. Another hon. gentleman had thrown some doubt upon a statement he made in that speech, but he could only say he read word for word from the Act. He was surprised, therefore, that the hon. gentleman should have doubted his statement, because if he had ever read the Act, which he very much doubted.—(Mr. HORSWELL: I have done so many times.) Then, if the hon. gentleman read it once again he would find that the very words quoted in the Colyton speech were within the four corners of the Act. Mr. Pratt, in introducing the question, talked a good deal about the depressed state of agriculture. He listened to him with perfect astonishment, because only that very day he had let land at a very considerably increased rental, and whenever he had a farm to let he had at least a dozen applicants. Possibly Mr. Pratt meant that owing to recent bad seasons, the farmers had not made the profit they had in better years, and in that he was no doubt correct. Farming, like everything else in the present day, was in a state of transition. Land and farms were like every other commodity—in the market.

A good farm, with good farm buildings, with a landlord who gave a liberal agreement or lease, and whose estate was well secured, would invariably command the pick of the agricultural interest. But an estate that was freely farmed, and was held by a strict lease, framed by some lawyer who hardly knew a cabbage rose from a cabbage, was sure to be immensely deteriorated, and all the Acts of Parliament they might pass would never raise that land up to the condition of the land properly farmed. He had frequently to address agriculturists, but he did not like to go largely into the question, because it was a very large question, and one he could not do justice to in the time for which he felt it right to ask their indulgence. But wherever he went he always endeavoured to promote the interest of the tenant farmer. His great objection to this resolution was that it was so vague, and really asserted nothing that was of any value. If there was an absence of legal security to the farmer for his outlay in improving the land no doubt it was a source of diminution of the home supply of food to the nation. There was no doubt about that. But he would just recall to their minds the fact that there was such a thing as self-interest. It was undoubtedly to the advantage of the landlord, if he knew his own interest, to take care that he had the very best tenants he could possibly obtain. He could only do that by giving such agreements as would allow them to take the farm. There was thus a much stronger security in the obvious self-interest of the landlord than they could have in any legal enactment that could possibly be passed. As to the last part of the resolution, he should very much like to know how Mr. Pratt proposed to secure the very desirable end that he had in view. He had heard this question thoroughly discussed for twenty-five years, he had heard all sorts of leases and proposals, but he had never heard of anything more practical than had been arrived at in the Agricultural Holdings Act. That Act was largely discussed in the House of Commons; it was also discussed at a large meeting at his own residence, when that practical and experienced agriculturist, Mr. Knight, M.P., for Warwickshire, was present; every clause was gone through with the utmost care, and it was impossible that any Act could have received more attention than did this one. If any agriculturist would suggest to the House of Commons an improvement upon that Act, they would confer a benefit which these vague resolutions never could confer. The resolution now before them had neither head nor tail, for it did not say what was to be the nature of the compulsory law it would suggest. Mr. Pratt would confer a real benefit if he came forward with a measure which would give the tenant-farmer that security which all reasonable men and all men who understood agriculture desired to see made the law of the land.

Mr. PRATT, in reply, thanked the members for the reception given him, and he did not think the time had been idly spent in discussing this matter. As to the remarks of the Chairman, Sir Lawrence had entirely failed to establish that there was any legal security whatever for the tenant's capital. He contended he was right in arguing that the Agricultural Holdings Act was inoperative, inasmuch as it was contracted out of by 99 out of every 100 landlords. He did not see the use of discussing such an entirely abortive measure—it was dead, and there was an end of it. The fact that the House of Commons by deliberate vote declared that there was a necessity for security to the tenant-farmer strongly proved his case. He listened with much interest to the speech of Mr. Acland, and was surprised to hear him come down on compulsory legislation, because the present Sir Thomas Acland and the late Mr. Pusey were the men who first strongly urged the necessity of doing something to give the tenant-farmer security for his capital. As to compulsory legislation in matter of contract without precedent, Mr. Horswell had fully answered that. He protested against the construction put on his words by one speaker who assumed that he wished to sow dissension between landlord and tenant. He did not wish to do anything of the kind, but, on the contrary, the course he proposed would establish between them a stronger bond of union, because their interest would be identical. He must decline the task the Chairman would impose upon him of defining the enactment. He was not a lawyer; he could merely suggest general principles, and leave the Legislature to deal with the details.

The motion was then put and carried unanimously, and a vote of thanks to the Chairman terminated the proceedings.

AGRICULTURAL SOCIETIES.

ROYAL AND CENTRAL BUCKS.

The nineteenth annual meeting of the old county Society was held at Aylesbury on September 20, and was well attended considering that the weather was by no means propitious.

First in importance, agriculturally at least, was the display of cart stallions, to which additional stimulus had been lent by the handsome prizes given by Lord Carington. There were seven entries, including sires well known in this district, and whose forms have been familiar during the late season upon most market days in Aylesbury. The class, if not numerous, was undoubtedly an excellent one, as evidenced by the fact that four out of the seven horses were honourably noticed by the judges. The first prize was awarded to the grand iron-grey of Mr. W. Jackman, of Brill—undoubtedly a most compact and serviceable horse; while the second went to Lord Ellesmere's five year old Pride of the Shires. The difference in merit between the two was hardly perceptible, the Brill horse being upon the whole, however, the more compact throughout, though Pride of the Shires perhaps carried the best fore-quarters. Mr. Cole's capital and well-built horse King of the Vale, a three-year-old blue-roan, was deservedly highly commended. The class generally was good. Class 13, agricultural geldings of three years and over, contained nine entries, the best of the lot belonging to Mr. J. P. Terry, of Putlowes, a very useful animal, to which the first prize (Mr. Du Pré's silver cup) was awarded. Class 14, for geldings under three years old, originally included seven entries, but one was withdrawn. Mr. W. Flowers took the cup with a nice compact black animal, giving promise of utility in either plough or cart. In the mares' class, over three years Mr. George Humphreys took Miss A. De Rothschild's cup. The winner, the best of a class of seven, was likely looking enough. In Class 16, for mares and foals, there was a more numerous competition, the entries being ten in number, and several of them of rather superior quality. The first prize went to a mare and foal shown by Mr. W. R. Rowland, and the second to Messrs. Denchfield. Both the winning mares and the offspring were good specimens of agricultural horseflesh. Class 17, mares under three years, were numerically a poor one, only four animals being entered. The first-prize winner was a useful mare belonging to Mr. W. Flowers. As was to be expected, Miss Hannah De Rothschild's Mentmore cup for the best yearling cart colt or filly, bred within twenty-five miles of Mentmore, found a spirited competition, so far as the number of entries was concerned, though four of them were made by two exhibitors, Mr. W. R. Rowland and Mr. W. Flowers. Mr. Rowland succeeded in taking the prize. The class generally was a very fair one. The hunting classes, 19 and 20, were both well filled. The jumping competition, success in which forms a point of merit, was as usual one of the most attractive features of the whole Show. The winner of the Aylesbury plate was Mr. M. Mead, with his bay mare Hannah (by Grandborough), Mr. John Cooper taking second prize; while Mr. H. Monk's bay horse Pilot was reserved. The competition throughout lay mainly between these three horses, which had to clear the hurdles several times before the judges could decide between them. The jumping of Mr. Monk's horse was, if anything, better than that of either the others, but it was inferior in other respects. There were two or three spils, though none of them of a serious nature. The rider of Mr. Barry's horse was thrown twice, the second time rather heavily, and he

narrowly escaped being rolled and trampled on. As it was he sustained a shaking which deterred him from a third attempt. Mr. Monk, was more fortunate in Class 20, taking first prize with a dark brown horse, showing blood and bone, and every apparent capability for the hunting field. The two nag classes were well filled, so far as the list was concerned, but all did not put in an appearance. The first prize in Class 21 went to a nice chestnut mare of Mr. H. Gurney, while Mr. James Pettit's Gainsborough took the Meyer de Rothschild Memorial Cup for yearlings. Both mare and yearling were by Restitution.

We were sorry to see so few entries in the bull classes, especially in the older class, which contained only two animals, though both were unquestionably good specimens of the Shorthorn. A very nice young bull was that shown by Mr. Freeman, in the class under two years. He was only nine months old, but very handsome, and symmetrical in all points, and deserved the first prize, which the judges awarded him, the second going to Mr. G. Oakley's St. Lawrence, a fine showy specimen of the pedigree Shorthorn. In the single milch cow class the entries, though few, were of high quality. Mr. T. Kingsley took first and Mr. J. A. Mumford second prize with Lady Ducie 3rd; and we think the judges must have had some difficulty in settling the respective merits of the two cows, which were both rare specimens of dairy stock. In the three cows' class the competition was confined to four only of the Vale of Aylesbury dairy farmers, and Messrs. Denchfield having entered three out of the four trios certainly did their best to take both prizes, and succeeded; their cows were, however, a credit to their herd and to the Burston pastures. The heifers in milk or calf class comprised some excellent entries, so far as quality was concerned. Mr. Mumford's Country Lass took first place, a heifer of unexceptionable points and unquestionable milking qualifications. The class generally was a capital one. There were only two entries in the heifers in pairs, and of course the judges had nothing to do but apportion their respective merits, which were pretty nearly balanced, both pairs being well matched making an allowance for three months' difference in ages. The fat cows' class was but a small one, and the adjudication must in this class have been, as compared with some of the others, an easy task. Mr. John Rose and Mr. R. Fowler were respectively owners of the first and second prize animals, and both cows were ripe, well-filled specimens of Buckinghamshire cattle feeding.

The show of sheep was not a very extensive one in point of numbers, but the quality in all the classes was high. In the ram class Sir W. Clayton's five-guinea cup, as a matter of necessity, went to Mr. Treadwell's grand Oxfordshire Downs, and likewise the second prize. The sheep were, we believe, the same pair that have already spread the name and fame of Winchendon far and wide this season. In most of the remaining sheep classes the competition lay chiefly between Mr. Brassey, of Heythrop Park, and Mr. N. Stilgoe, both well known Oxfordshire breeders.

The three pig classes were all fairly well filled, the leading exhibitors and prize-takers being Messrs. Wheeler, Harris, Biggs, and R. Fowler. The pigs were all good ones, both as regards breeding and feeding.

Modern agriculture is nothing without roots, the growth of which has of late years been greatly encouraged by the prizes given by eminent firms in the seed line. There were several classes, the principal show being,

however, made by Mr. J. P. Perry, of Banbury Nursery, and Messrs. Sutton and Sons, of Reading.

PRIZE LIST.

HORSES.

AGRICULTURAL.

Stallions.—cart stallion, three years old and upwards, the winners of the first and second prizes to travel within twenty miles of Aylesbury, and to remain at Aylesbury three nights in each week during the whole of the ensuing season.—First prize, £50, W. Jackman, Brill; second, £20, the Earl of Eglonshire, Woreley.

Geldings, three years old and upwards.—First prize, a silver cup or piece of plate, value £5 5s.; J. P. Terry, Patlowes; second, £2, G. Richardson, Ellesborough.

Geldings, under three years.—First prize, a silver cup or piece of plate, value £5 5s., W. Flowers, Beachendon, Stone; second, £3, J. Clark, Lower Winchendon.

Mares, over three years.—First prize, a silver cup or piece of plate, value £5 5s., G. Humphreys; second, £3, E. M. M. Lucas.

Mare and foal.—First prize, a silver cup or piece of plate, value £5 5s., W. R. Rowland; second, £3, J. and E. Denchfield.

Mares under three years.—First prize, a silver cup or piece of plate, value £5 5s., W. Flowers; second, £3, Mrs. M. Seamons, Hartwell.

Yearling cart colt or filly, bred within twenty-five miles of Mentmore.—Prize, the Mentmore Cap, value £10 10s., W. R. Rowland, Cresslow.

Hunters.—Horse or mare, jumping to be a point of merit.—First prize, a silver cup or piece of plate, value £21, M. Mead, Linslade; second, £5 5s., J. Cooper, Overstone, Northampton.

Horse or mare for hunting purposes.—First prize, a silver cup or piece of plate, value £7 7s., H. Monk; second, £3 3s., W. Tomes, East Claydon.

Nag geldings and mares for riding and general purposes.—First prize, £5 5s., H. Gurney, jun., Aylesbury; second, £3, A. R. Howland, Thame.

Yearling nag colt.—Prize, value £10 10s., J. Pettit, Leighton Buzzard.

CATTLE.

HORNED STOCK.

Bulls, any breed, two years old and upwards.—First prize, a silver cup or piece of plate, value £5 5s., J. A. Mumford, Brill; second, not awarded.

Bulls, under two years.—First prize, a silver cup or piece of plate, value £5 5s., E. Freeman, Chilton; second, £2, G. Oakley, Lawrence End, Laton.

Cows, in-milk or in-calf.—First prize, a silver cup or piece of plate, value £5 5s., T. Kingsley; second, £3, J. A. Mumford.

Three cows, in-milk or in-calf.—First prize, a silver cup or piece of plate, value £10 10s., J. and E. Denchfield; second, a silver cup, value £5 5s., Messrs. Denchfield.

Heifers, in-milk or in-calf, under three and over two years.—First prize, a silver cup or piece of plate, value £5 5s., J. A. Mumford; second, £2, T. Kingsley.

Heifers, in pairs, under two years.—First prize, a silver cup or piece of plate, value £10 10s., T. Kingsley; second, T. Bliss, jun., Aylesbury.

Fat cows.—First prize, a silver cup or piece of plate, value £5 5s., J. Rose; second, £3, E. Fowler.

A silver cup or piece of plate, value £10 10s., for the best horned animal in the yard, being the property of a tenant farmer within twelve miles of Aylesbury, was awarded to Mr. Kingsley.

SHEEP.

Rams, any breed.—First prize, a silver cup or piece of plate, value £5 5s., J. Treadwell, Upper Winchendon; second, £3 3s., Ditto.

Five store ewe lambs, for breeding purposes.—First prize, a silver cup or piece of plate, value £5 5s., A. Brassey, Chipping Norton; second, £2, J. Treadwell.

Five fat ewes, any breed or age.—First prize, a silver cup or piece of plate, value £5 5s., A. Brassey; second, £3, N. Stilgoe.

Five fat shearlings.—First prize, a silver cup or piece of plate, value £5 5s., A. Brassey; second, £3, N. Stilgoe.

Five ewes, any breed, intended for breeding purposes.—First prize, a silver cup or piece of plate, value £5 5s., A. Brassey; second, £3, N. Stilgoe.

Five thoraxes, any breed, intended for breeding purposes.—

First prize, a silver cup or piece of plate, value £5 5s., A. Brassey; second, £2, T. Kingsley.

Ten ewes, any breed, intended for breeding purposes.—Prize, a silver cup or piece of plate, value £5 5s., J. Rose.

PIGS.

Boars, any breed.—First prize, £3 3s., W. Wheeler, Long Compton, Shipston-on-Stour; second, Ditto.

Sows, in-pig or with litter.—First prize, a silver cup or piece of plate, value £5 5s., R. Fowler; second, £3, Harris and Biggs, Cablington.

Three fat pigs.—First prize, £3 3s., W. Wheeler; second, £3 3s., Harris and Biggs.—*Bucks Herald*.

NORTH-WEST BUCKS.

The annual meeting of the North-West Bucks and adjoining portions of Oxfordshire and Northamptonshire Agricultural Association was held on September 18. The ploughing matches commenced about eleven o'clock, on the farm of Mr. H. Swayne, of Gawcott, upon clover ley. The competition was, however, by no means extensive, as only five teams presented themselves. The work done was fair. The stock show took place on the usual grounds at the back of the Horse and Groom Inn, and was well attended, the weather being as favourable as could be desired.

The Show itself was not equal, so far as number of entries was concerned, to that of last year, but the quality, especially in the sheep classes, was excellent. In the cattle department the bull classes were badly filled. In Class 1, for the best bull under six years, there were only three entries, and only one put in an appearance—a fine beast, nearly three years old, belonging to Mr. L. Bennett, of Boycott, to which consequently the prize was awarded. We question, however, if he would have taken more than second place had Mr. Mumford's Third Duke of Kirklington, entered as one of the competitors, come to the showyard. Mr. Mumford took first prize for bulls above one and under three years, while Mr. Bennett was again successful for Sir Harry Versey's prize for bull calves. The winners in both these last classes were nice animals, and gave high promise of grander development. The female classes were well filled, and some capital specimens were shown in all of them. There were ten entries for the best Shorthorn milch cow, the first prize going to the Boarscroft herd, and the second to that of Mr. Paxton, of Shelswell. Mr. J. Arnatt, of Tingewick, was very little behind. In heifers Mr. Kingsley was again a winner, but only a second one, but so good was the animal that Mr. E. Paxton, of Wollaston, whose heifer took first prize, had not a little room for congratulation. In Class 5, the two best cows in-calf or milch, there were eight entries, and again did Brill take first honours, Mr. Arnatt, of Tingewick, holding second place. The first prize cows, Lady Ducie and Country Lass, were capital Shorthorns, and likely to be heard of again. The heifer calves, under two years, were only four entries, and Mr. Crawford, of Newton Parcell, is the first prize, had certainly the best of the lot. The heifer calves under one year class were only represented by four entries, two of which were from one herd, that of Mr. W. Crawford. Mr. Crawford failed to win, the first prize going to Mr. J. Treadwell, of Radelive, and the second to Mr. Paxton, of Wollaston. The winners were Devons and Shorthorns respectively, and were nice shapely calves, giving every indication of future excellence.

The horse show at Buckingham is always a leading feature. In the cart mare and foal class there were ten entries, including several of superior quality. Mr. P. Salmon, of Lafield Abbey, took first, and Mr. W. Tomes, of East Claydon, the second prize. There was not, we think, much difference in quality between them as regards the mares, though Mr. Salmon's colt seemed to have the most bone. In cart geldings both prizes went to the neighbourhood of Aylesbury, Mr. Terry, of Patlowes, taking the first with a very compact five years old, and Mr. White, of Pollicott, the second. Major Morgan's prizes for cart mares found only three competitors. The class, though numerically small, was a good one. Cart geldings under three years were represented by five entries, fair animals, but not extraordinary. The three classes for cart fillies and colts mustered nearly a score of entries, and included some good animals, one of the most promising being the Depper filly, exhibited by Mr. Parsons, of Charwelton, Northamptonshire, and bred by the late Mr. T. Attwood. We next come

to the various classes for nags, mares, geldings, colts, and fillies severally, comprising some two dozen entries, but all were on the field. Some good animals were shown in each of them, the best class of the lot, as far as quality was concerned, being Class 10, in which Mr. C. Pilgrim gives a £5 prize for the best mare or gelding fit to carry fourteen stone. There were only four entries in this class, but besides the winner shown by Mr. Saunders, of Fleet Marston, there were two commendations. The jumping prizes at Buckingham, as elsewhere, are always a source of particular interest. This year there were two, given respectively by Mr. H. B. Arnaud and Mr. J. Arnatt, and they brought out a field of nine entries. The first prize was won by Mr. H. Monk, of Winalow, and the second by Mr. Kingley, of Boarscroft. Both the winning horses performed in good style, and we have no doubt, if they remain in the hands of the present owners, are likely to take places with the Barons during the ensuing season.

The best feature in this year's Buckingham Show was undoubtedly the sheep. We do not remember seeing on this show-ground such a fine collection. In the ram class, as might be expected, nobody could come near the Upper Winchendon sheep, Mr. J. Treadwell winning both first and second prizes easily. As Oxfordshire Down his tups were not approachable by either of their competitors, and they were by no means bad sheep either. In the sheep classes for store ewes, thewes, and ewe lambs a number of very superior animals were shown, particularly by Mr. Bennett, of Boycott. They were sheep for the most part possessing both good fleeces and plenty of mutton, and well deserved the prizes which were given them on all hands by the local sheep breeders, as well as by the judges.

The pigs were few, and in three classes; the first prizes were taken both for boars and sows by Mr. Lee, of Hartwell House. Mr. Lee's pigs, as indeed all the others shown, were of the large black breed. They gave signs of affording, when their time comes, a good supply of bacon, which is the first desideratum in their tribe.

In butter there were thirteen entries. The first prize was awarded to Mr. A. C. Rogers, of Buckingham, for some very rich-looking butter, which we understood was the produce of Alderney cows. The second prize went to Mr. Hiron, of East Claydon, and we cannot say that there was much difference in the respective qualities. Mr. Barge, of Hillesden, was highly commended. The whole of the butter shown was creditable to the dairymaids of the district.

The ploughing competition we have already alluded to, and we regret that it did not command a larger number of entries. —*Bucks Herald.*

BARNARD CASTLE.

This ancient Society held its seventy-eighth annual meeting on Sept. 27. There was a large entry of horses, and the quality was meritorious. The cattle were not numerous, but were of good quality. Of roadsters there was a good show, and sharp competition for the prizes. There was also a show of cereals, which was not up to the average of previous exhibitions.

BRECONSHIRE.

The 122nd annual Show of the Breconshire Agricultural Society was held at Brecon on September 19. Last winter a suggestion emanated from the Breconshire Chamber of Agriculture which, if it had been carried out, would have been to amalgamate the annual exhibition of entire horses with the Society's Show. The Society, however, rejected the proposal, and thus what would in all probability have been a valuable accession to its strength was lost. That the Show needs some such addition to make it more attractive is evident from the fact that the Society is at present labouring under financial embarrassments. Certainly those embarrassments are not serious, but they exist, and that is sufficient. It is three years now since the two days' Show scheme was introduced, and the scheme does not appear to have worked well somehow. People say half-a-crown is too much for admission, and this may serve to throw some light on the position of the Society. Tuesday was devoted exclusively to the trials of harness and harness horses, and so far the Show was about equal to its predecessors. The entries of all classes numbered 8. It was a beautiful day, precisely the sort of weather to

attract spectators, and the ground was visited by a good many people in the course of the day. —*Hereford Journal.*

CHAPEL-EN-LE-FRITH.

The annual Show of this Society was held on Sept. 25, when the attendance was very large. There were nearly 500 entries, including poultry and dogs. The quality of the cattle and horses was, on the whole, good, and there was a good show of poultry and dogs.

LUDLOW.

The annual Show of the Society took place at Ludlow on Sept. 27. The weather was fine, and the show attracted a large number of visitors. The display of stock was considered to be the best ever made by the Society. There was a capital lot of Hereford cattle, the most successful exhibitors of bulls being Mr. W. Taylor, Mr. A. Rogers, Mr. Cheswardine, and the Earl of Powis. The bull Anxiety, which took first prize in Class 9, was first both at the Bath and the Leominster shows. Of the heifers Leonora, the property of Mrs. Edwards, was first. The sheep were a good lot, and there was a large and good show of horses.

MIDDLETON.

The annual Show of the Middleton Agricultural Society was held on September 20, and was visited by from 10,000 to 12,000 persons. There were 2,080 entries (of which 673 were agricultural implements and miscellaneous articles), as against 2,220 last year. The show of horses was one of considerable merit, being superior to last year's; but in most, if not all, the other classes the exhibition was inferior to the preceding one. Sheep were conspicuous by their entire absence, the committee having decided to offer no premiums in respect of them in consequence of the insignificant number of last year's entries. The Society, it may be stated, has this year been placed under new management; the subscriptions have risen to about £220, and hopes are entertained that better days are in store for the Society, which during the last four or five years has exhibited symptoms of decay. In the horned cattle class there were 33 entries and most of the premiums were weakly contested. Thomas Atkinson, Unsworth, near Bury, was awarded the chief prizes in the district farmers' competition for bull under two years, dairy cow in milk or calf, and two year and one-year-old heifers; whilst in the open premiums he obtained the leading honours for bull over two and not exceeding four-years-old, and heifer calf under twelve months, there being no exhibitor opposed to him except in one of the whole six premiums. William Bird, Higher Crompton Farm, near Oldham, was awarded the prize for bull calf under twelve months, in the district competition, his being the only entry. In the general competition first prizes fell to the Stand Stud Company, Whitefield, for bull over one year and not exceeding two years, dairy cow in calf or milk, and two and one-year-old heifers. C. W. Brierley Prestwich, had similar success with a bull calf under twelve months and three cows in calf or milk; and Nathan Manock, Rochdale, with a geld cow. There were about 270 entries of horses, and the following first prizes were awarded: District farmers' premiums, for agricultural purposes: Brood mare, Jane Heap, Boarshaw Farm, Middleton; mare or gelding under 16 hands, Samuel Sidebottom, Castleton House, near Rochdale, who also took the chief prize for single cart or waggon horse for draught purposes; pair of plough horses, and also two-year-old gelding or filly, G. F. Statter, Whitefield; three-years-old and also yearling gelding or filly, Robert Lindsey, Pileworth, near Bury; foal by Victory, and also weaning colt, John Shepherd, Hebers, Middleton; pair of horses for draught purposes, Robert Booth, Rhodes House, Middleton. In the general competition first prizes were awarded the Stand Stud Company for stallion, brood mare, and two-year-old and also yearling gelding or filly for agricultural purposes; for stallion and brood mare for draught purposes; for brood mare in roadsters; and in animals for road or field, for two year-old gelding or filly and stallion for hunters. C. W. Brierley was also successful with pair of horses and mare or gelding for agricultural purposes, and mare or gelding for draught purposes. First prizes were also awarded for three-year-old gelding or filly for agricultural purposes to E. Booth; weaning colt

Messrs. S. Cheetham and Co., Middleton; draught horse, under 16 hands, for agricultural purposes, T. Walker Spotland; three-year-old gelding or filly for road or field, S. Sidebottom; one-year-old ditto, J. Wardleworth, Bury; weaning colt or filly ditto, W. A. Peters, Townhead, Rochdale; cob, mare, or gelding not exceeding 14½ hands, J. W. Radcliffe, Werneth Park, Oldham. The leading prizes in pigs, of which there were only eleven entries, were taken as follows: Boar of any breed, J. Jones, Oldham; breeding sow, Messrs. J. and J. Nuttall, Heywood; fat hog, and also store pig, P. Dingle, Bowdon. There were 191 entries of dogs, and prizes were also awarded for poultry, pigeons, and farm produce.—*Manchester Examiner*.

MIDLAND.

The annual exhibition of live stock and agricultural produce under the auspices of the Midland Agricultural Society took place in a field near the Gas Works at Alfreton, on Sept. 26. There were upwards of 400 entries to hand. *The Derby Reporter* says:—

The cattle pens were well filled, and formed, according to the opinion of the judges, a really excellent show, whether regard was paid to the number of the stock in the yard or to the quality of the animals entered for competition. There were several fine animals in the bull classes, but, to the surprise of many visitors, the bull belonging to Mr. F. N. Smith, which carried off the prize at Derby last week for the best animal in the yard, and also obtained a first prize at the recent East Derbyshire Show, was merely highly commended on this occasion, the animals belonging to Mr. C. K. Chamberlain, who is always a most successful exhibitor, being considered by the judges to be of superior merit. In the Tenants' Class for bulls of any age Mr. Samuel Radford took the premier prize with a fine animal, Mr. William Oates being commended. Mr. C. A. Brewer was the only exhibitor of bulls under two years old, and his exhibits were of such merit as to warrant the judges in giving him the first prize. The tenants were well represented, Mr. Abraham Taylor being first, and Mr. S. Ashmore second. Mr. Chamberlain and Mr. M. T. Hopkinson were first and second in the landlords' class for milking-cows, there being four entries, Mr. John Booth (Holmgate) and Mr. Abraham Taylor taking the lead in the tenants' class. There were eight entries for the prize offered to the landlords for the best in-calf cow, Mr. John S. Sampson receiving the first prize with a splendid animal; the second prize being taken by C. R. Palmer Morewood, Esq. Mr. John Rooth's in-calf cow took the first prize in the tenants' class, the second being awarded for an animal of almost equal merit to Mr. Benjamin Rooth's. Perhaps the best class of animals amongst the cattle was the heifers, which were of unusual excellence, and warmly commended by the judges, who gave the prizes in the landlords' classes to Mr. C. R. Palmer Morewood and Mr. C. A. Brewer respectively. The whole class of heifers belonging to the tenants was highly commended. In it were seven entries, and Mr. Abraham Taylor and Mr. John Wright were the successful exhibitors. The calf classes were well filled up, and some promising animals were penned. Two special prizes were offered by Mr. C. Seely, jun., for the two best dairy cows in the tenants' class; the first, consisting of a silver cup, value £3, was given to Mr. Abraham Taylor, and the second to Mr. S. Ashmore. Mr. W. Oates, who was a successful exhibitor in more than one instance, took the prize given by Mr. F. N. Smith for the best Shorthorned animal in the yard belonging to the tenants, and Mr. Chamberlain was the successful exhibitor amongst the landlords in this respect.

The show of sheep was about as large as last year; but the various classes were comprised of animals of only average merit. Mr. T. M. Hopkinson, Mr. R. Johnson, Mr. Chamberlain, Mr. N. Matthews, Mr. H. Hepworth, Mr. G. Limb, and Mr. W. Hollingworth were the prize-takers in the various classes for Leicester sheep, the extra stock sent by Mr. F. N. Smith being commended by the judges. There were but two classes of Shropshire sheep, Mr. W. Smedley and Mr. J. Jackson being first and second for ewes, and Mr. W. G. Turbutt and Mr. C. R. Palmer Morewood taking the prizes for ewes.

There were no less than 43 entries for the prizes offered for pigs, and as nearly all the animals were present it will be seen that there was no diminution as regards number when compared

with former years, while the quality in some instances was far above the average. Perhaps the best class was that in which the tenants competed with fat pigs under 18 months old. All the animals in it were highly commended by the judges, and they awarded the prizes to Mr. J. Webster for a splendid animal only a little over a year old. The sows and pigs were next in the order of merit, the pens containing some promising animals. An extra prize for the best store pig in the yard belonging to a tenant was given to Mr. J. B. Gregory.

The horses are usually a very attractive part of an agricultural show, and this year this department was equal to former occasions. There was but one entry for the two prizes offered to landlords for brood mares of the cart kind, with foal at foot, and the first was awarded to Mr. G. Hodgkinson, but the tenants came to the front, giving the judges some difficulty in deciding upon the merits of the horses which came before them. Mr. Benjamin Rooth was, however, the champion, Mr. Jonathan Fletcher being second, and Mr. J. Nix highly commended. The tenants also contributed an excellent class of yearlings of the cart kind, and the landlords' cart colts were very good, but the agricultural horses could not be said to be of more than ordinary merit. Mr. Chamberlain and Mr. Brewer were first and second respectively in the landlords' class for the best pair of horses employed solely for agricultural purposes, and which had ploughed in the match; while Mr. J. Nix took the two special prizes given by Mr. F. Arkwright, M.P., for the best entire cart horses of the draught kind. The leaping took place in the afternoon, and, as usual, was witnessed by a large number of people, who were also greatly amused when the judges were called upon to award two special prizes, given by Mr. H. Capit, for the best donkey driven in harness. Although the spectators were amused some of the drivers beat the animals very heavily, and it may therefore be advisable for the committee to consider how this may be avoided another year.

The cheese and butter were exhibited in a small tent, and attracted the attention of a good number of visitors. Mr. J. W. Grigg, ironmonger, of Alfreton, exhibited a number of ploughs and other agricultural implements, his being the only stand. The ploughing took place in a field near Swanwick belonging to Mr. W. Haslam, and the judges reported that the work on the whole was well done. Altogether, the Show was most successful, reflecting credit on Mr. Milner, the hon. secretary, Mr. Robinson, the assistant secretary, and all concerned.

MILLOM AND BROUGHTON.

This Show was held at Milloom on September 21st, and was a very successful one, the attendance having been larger than on any previous occasion. There were upwards of 400 entries. The quality of the stock exhibited was very creditable to the district. There was also an excellent display of butter.

NORTH TYNE.

This Society held its twenty-seventh Show at Bellingbar. The Show was quite up to former Shows in point of quality in the several classes, while the numbers were over 100 more than those of last year's Show. The figures of the respective classes were as follows:—cattle, 42; horses, 115; sheep, 179; pigs, 13; poultry, 99; dogs, 187; cats, 16; dairy produce, 41; implements, 13; total, 705.

WIGTON.

The annual Show was held on Sept. 26, when the fine weather induced an unusual number of visitors to attend. On the whole the Show was considered a fair one, but Shorthorns were not so well represented as they have been at some previous exhibitions. There was a small but good lot of Gallopyes. Cart-horses were fairly represented, and there was a fine lot of roadsters. Of sheep there was a fair show, and of pigs a good one.

CARMARTHENSHIRE.

Owing to the great number of Shows which have been held recently, we have been obliged to hold over several reports, and to omit others. The annual meeting of the

Carmarthenshire Society was held at Carmarthen on the 21st ult. We can only find space for the prize-list, which we take from *The Carmarthen Journal*.

PRIZE LIST.

CATTLE.

Bull of the black breed, not exceeding four years old.—Prize, £5, G. Parke.
 Bull of the Shorthorn breed.—Prize, £5, R. Stratton, Newport.
 Bull of any other pure or established breed.—Prize, £5, T. Thomas, Cowbridge.
 Bull of any other breed, the property of a tenant farmer.—Prize, £3, S. Owen, Gellygatti.
 Yearling bull of the black breed.—First prize, £3, Mr. Thomas, Foxhole; second, £2, Mr. Harries, Nantyrhebog.
 Yearling bull of the Shorthorn breed.—First prize, £3, Mr. Stratton; second, £1, Viscount Emlyn.
 Yearling bull of any other breed.—First prize, £3, and second, £1, Mr. Thomas, St. Hilary.
 Cow, in milk or in calf, of the black breed.—First prize, £3, Mr. Walters, Molfre-iaf; second £2, Mr. Thomas, Tre-eadgan.
 Two-year-old heifer of the black breed.—First prize, £3, Mr. Evans, Posty; second, £1, Mr. Thomas, Foxhole.
 Heifer of the black breed, under two years old.—First prize, £5, and second, £3, Mrs. Williams, Love Lodge.
 Cow, in milk or in calf, of the Shorthorn breed.—First prize, £3, second, £2, and commended, Viscount Emlyn, M.P.
 Two-year-old heifer of the Shorthorn breed.—First prize, £3, and second, £1, Viscount Emlyn.
 Yearling heifer of the Shorthorn breed.—First prize, £2, Mr. Stratton; second, £1, Viscount Emlyn.
 Cow, in milk or in calf, of any other pure breed.—First prize, £3, and second, £3, Mr. Thomas, St. Hilary.
 Two-year-old heifer of any other pure breed.—First prize, £3, and second, £1, Mr. Morgan, Llwynn.
 Yearling heifer of any other pure breed.—First prize, £2, and second, £1, Mr. Morgan.
 Cow in milk or in calf of any pure breed, to be competed for by tenant farmers.—First prize, £2, P. R. Lewis; second, £1, Mr. Owen, Gellygatti.
 Heifer of any pure breed, under three years old, to be competed for by tenant farmers.—Prize, £2, Mr. Owen, Gellygatti.
 Pair of two-year-old steers of the black breed, bred by the exhibitor.—Prize, £3 10s., Mr. Thomas, Pentredavies.
 Pair of yearling steers of the black breed, bred by the exhibitor.—First prize, £2, Mr. Evans, Posty; second, 10s., Mr. Richards, Capeldewi.
 Pair of yearling steers of any other breed or cross, bred by the exhibitor.—First prize, £2, Mr. Lewis, Bwlch, Abergwilly; second, £1, Mr. Harries, Tyllywd.
 Bull calf of the black breed, under 12 months old.—First prize, £2, Mr. Davies, Typicca; second, £1, Mr. Davies, Capeldewi-canol.
 Bull calf of any other breed under 12 months old.—First prize, £2, Mr. Stratton; second, £1, Mr. Thomas, St. Hilary.
 Bull calf of any breed, the property of a tenant farmer.—Prize, £2, Mr. J. Harris, Filroath.
 Pair of heifer calves of the black breed.—First prize, £2, Mr. Davies, Capeldewi-canol; second, £1, H. Davies, Typicca.
 Pair of heifer calves of any other breed.—First prize, £2, Viscount Emlyn; second, £1, Mr. Thomas, St. Hilary.
 Pair of heifer calves of any breed, to be competed for by tenant farmers.—Prize, £2, E. M. Davies, Capeldewi.
 Bull, cow, and her offspring, of the black breed.—Prize, £5, Mr. Davies, Typicca.

HORSES.

Brood mare and foal, calculated for hunters.—First prize, £3, and second, £3, R. Waters, Sarnau (Bessie and Rosette).
 Hackney brood mare and foal.—First prize, £3, D. Lewis, Pantglas; second, £2, Mr. Richards, Waunole.
 Hackney cob, gelding, or mare, not exceeding 15 hands high.—First prize, £3, D. W. Rees, Llanelly (Chatrin); second, £2, Capt. J. W. Hughes, Glancothy (Betty).
 Gelding or mare adapted for carriage, and driven in harness.—First prize, £3, W. J. Buckley, Penefai, Llanelly; second, £2, B. Parnall, Llanstephen (Black Prince).

Two-year-old gelding or filly, calculated for carriage or hackney.—First prize, £3, S. Owen, Gellygatti; second, £1, H. Parnall, Llanstephen.

Yearling colt or filly, calculated for a hunter.—First prize, £3, B. Waters (Tramp); second, £1, W. G. Hughes, Glan-cothy.

Yearling colt or filly, calculated for a hackney.—First prize, £2, and second, £1, D. H. Thomas, Derllys.

Pair of cart horses, geldings, or mares, shown in harness, the property of tenant farmers.—First prize, £3, Mr. Phillips, Caerleon; second, £2, Mr. Morris, Penhen.

Gelding or mare of the cart breed.—Prize, £2 2s., Mr. Davies, Typicca.

Brood mare and foal, calculated for agricultural purposes.—First prize, £3, Mr. Phillips, Cowin Grove; second, £2, Mr. J. Phillips, Caerleon.

Three-year-old gelding or filly of the cart breed, the property of a tenant farmer.—First prize, £2, Mr. Harries, Tyllywd; second, £1, Mr. Davies, Yenywen.

Two-year-old gelding or filly, calculated for agricultural purposes.—First prize, £3, Mr. Footman, Ilavodwen; second, £1, Mr. Davies, Capeldewi-canol.

Yearling colt or filly, calculated for agricultural purposes.—First prize, £2, D. H. Thomas, Derllys Court; second, £1, Mr. Phillips, Caerleon.

Pony of any other age, under 13 hands high.—First prize, £2, Mr. J. Rees, Llanboidy; second, £1, Master Vincent Thomas, Starling Park (Dick).

Sucking colt or filly of the cart breed.—Prize, £1, T. Edwards, Glanrhyd Farm.

Sucking colt or filly, not by one of Mr. Broad's cart stallions.—Prize, £1, T. John, Clyngwyn.

Sucking colt or filly, got by Mr. Campbell's (Down) (Star of the West).—First prize, £1, B. Davies, Pentrewin; second, 10s., Mr. Phillips, Caerleon.

Sucking colt or filly of the hunter or hackney breed.—Prize, £1, R. Waters.

Sucking colt or filly of the hunter or hackney breed, got by one of Mr. Broad's entire horses.—Prize, £1, Mr. Richards, Waunole.

SHEEP.

SHORTWOOL.

Two-year-old or aged ram.—First prize, £3, Mr. Rees, Garth Farm, Swansea; second, £1 10s., Mr. Phillips, Caerleon.

Yearling ram.—First prize, £3, Mr. Rees; second, £1 10s., Earl of Cawdor.

Ram lamb.—First prize, £2, and second, £1, Mr. Rees.

Pen of five yearling ewes.—First prize, £3, Mr. Rees; second, £1 10s., Earl of Cawdor.

Pen of five ewe lambs.—First prize, £3, Mr. Griffiths, Llwyn-poid; second, £1, Mrs. Williams, Love Lodge.

LONGWOOL.

Ram of any age.—Prize, £3, Mr. Thomas, St. Hilary.

Ram lamb.—First and second prizes, £2, Mr. Thomas.

Pen of five ewes of any age.—Prize, £3, Mr. Thomas.

Pen of five ewe lambs.—Prize, £2, Mr. Thomas.

PIGS.

Boar.—Prize, £2 10s., Viscount Emlyn.

Sow (having had a litter of pigs, and in breeding profits).—First prize, £3 10s., P. R. Lewis; second, £1, Mr. Prosser.

Open sow under 12 months old.—First prize, £2, and second, £1, Mr. Thomas, Glanrhyia.

MERIONETHSHIRE.

The tenth annual Show of the Merionethshire Agricultural Society was held at Bala, on Tuesday, September 25th. The Show was under the presidency of Sir Watkin Wynn, who takes the warmest interest in the Society, and was not only a munificent contributor to the prize fund, but also one of the principal exhibitors. The vice-president was Mr. R. Fughe, Caerberlan, Abergynolwyn. Upwards of £375 was given away in prizes, and the Show was on the whole one of the very best that has ever been held in Merionethshire. The show of cattle—and especially of Welsh cattle—was extremely good. A finer exhibition of stock of the native breed has perhaps seldom been seen in the principality. Of sheep and pigs there was a very fair show, though not one of extra-

ordinary merit. Some very useful ponies and cobs were shown, of good breed and action. Amongst them were several which would, in the opinion of the judges, if carefully trained for the next eight months, be quite able to hold their own at the Islington Horse Show. The horses generally were many of them superior to those usually exhibited at Shows of this kind. In Welch cattle the first prize for a bull of three years old was awarded to a noted breeder, Mr. Richard Rowlands, of Talybont, for a remarkably fine bull. The bull exhibited by Mr. Williams, of Pentremawr, which took second honours, was also a very good one. For the best bull under three years old the honorary first prize was awarded to Captain Best for the same fine animal for which he obtained first prize at the Llangollen Show. Mr. David Jones, of Llanuwchllyn, got the first prize for a handsome bull with shaggy hide and very good hips. No second prize was awarded in this premium. For a bull under two years old the first prize in the premium and the prize for the best bull bred in North Wales went to Mr. Thomas Jones, of Hafod Elwy, Cerygdrudion, for a beautiful animal with very straight back and short legs who literally had his honours thick upon him. The bull took a first prize at the Liverpool Show of the Royal Agricultural Society, and at Denbigh last week a first prize and the champion prize for the best Welsh bull of any age. Mr. Williams, of Pentremawr, who took the second for the best bull above three years old, also took the first and second prizes for the best cow, and Mr. Richard Rowlands, Talybont, who won the first prize for the best bull over three years old, was also awarded the first prize for the best heifer under four years old. The first and second prizes for the best heifer under three years old, were awarded to Mr. Edmund Griffith, of Tyddynda, Harlech for two very promising animals. There were only four entries in this premium. For heifers under two years old the first honorary prize and a challenge cup of the value of ten guineas, offered by Mr. C. Edwards, of Dolserau, Dolgellay, for the best heifer, whether of Welsh or any other breed, and which must be won three years in succession, were awarded to Mr. F. T. Jones, of Ciltargarth, for a very fine heifer, showing great width in the hips and very straight in the hind-quarters. This heifer took first prizes at the Show of the Edeyrnion Agricultural Society last year, and of the Uwechale Agricultural Society. The first prize in this premium was awarded to Mr. Thomas Jones, of Llanuwchllyn. In the premium for the best two oxen above three years old there were only two competitors—Sir Watkin Wynn and Mr. Vaughan, of Nannau. Sir Watkin's oxen were magnificent specimens of the Welsh breed. They were of great size, well-shaped, with fine heads and large horns, and were altogether very noble-looking animals. There were only two entries in the next premiums for the best two oxen above two and under three years old, and three in the last premium of the Welsh cattle class for the best pair of oxen under two years old. The first prize in the former premium was taken by Mr. M. Williams of Pentremawr, who was one of the most successful exhibitors in this class, and in the latter premium by Mr. Edward Edwards, of Cerygdrudion, a well-known breeder of Welsh cattle. In Class 3, for cattle of any other breed, Lord Harlech exhibited a very fine bull above three years old, for which he was awarded a first honorary prize. The second honorary prize fell to the only other competitor in this premium, Mr. W. E. Oakeley, of Tanybwch. The first prize for the best bull under three years old was awarded to a splendid Shorthorn, with particularly fine hindquarters, and with abundance of flesh, exhibited by Mr. Robert Davies, of Druid, Corwen, who also took first prizes for the best cow, the best heifer under two years old, and the best pair of yearling bullocks. For the best bull under two years old, the first honorary prize was awarded to a well-proportioned roan bull, exhibited by Lord Harlech; and the first prize to Mr. Joseph Davies, of Gwyddelwern, who was run very close by the winner of the second prize, Mr. Edward Jones, of Llandrillo. The honorary first prize for the best cow was assigned to Lord Harlech, and the honorary second prize to a very excellent animal shown by Mr. William Kerr, of Corwen. There were twenty-three entries in this premium—the largest number in the cattle classes—and the competition was exceedingly good. We may here mention that a prize of £5, offered by Mr. W. Taylor, of Dolgellay, for the two best Welsh cows, or two cows of any other breed, in calf or milk, was awarded to Mr. Richard Humphreys, of the Royal Goat Hotel, Beddgelert. Mr. Evan

Davies, of Corwen, took the first prize for the best heifer in calf or milk, under three years old. It was a white heifer of symmetrical proportions, and with a very pretty head. Mr. Kerr, of Corwen, was awarded a first honorary prize in this premium. Mr. John Williams, of Gwernhefn, Bala, was the sole competitor for the prizes offered for the best pair of oxen above two and under three years old, and to him the first prize was awarded, as well as the second prize in the next premium, for the best pair of yearling bullocks. In extra stock Lord Harlech exhibited a beautiful little baby Alderney, only three months old. The first prize of £15 for the best agricultural stallion that had travelled the districts of Harlech, Dolgellay, or Towy in the season of 1877 was awarded to Mr. Griffith Morris, of Cemmas-road, for Invincible, a very handsome dark grey stallion rising six years old, which also took the first prize at the Montgomeryshire Show. The extra prize of £5, offered by Mr. W. E. Oakeley, Tanybwch, was also awarded to Invincible, the honorary award being given to Hon. C. H. Wynn. The first prize of £16 in the next premium, the stallion having travelled the district of Bala in the season of 1877, was won by Mr. Robert Hughes, of Clawddnewydd, Ruthin, who also took the extra prize offered in this premium by Mr. H. Robertson, M.P. Mr. Robertson's prize for the best mountain pony stallion that has served mares in the county was awarded to Mr. John Williams, of Gwernhefn, Bala. The extra prize of £10 offered by Mr. E. Coulson, of Cersygodol for the best hackney stallion, having served mares in the county, was awarded to Mr. C. B. Williams, of Dolmelynllyn, Dolgellay. Mr. William Parry, Corrig-y-Drudion, was the winner of the first prize for the best mare and foal for agricultural purposes. The same mare and foal took second prizes at Denbigh, Conway and Uwechale. The extra prize of £5, offered by Mr. Samuel Holland, M.P. for the best mare and foal (the latter got by either Pride of Wales or Earnest Tom), was won by Mr. Owen Pugh, of Llangower, for a very large and well-shaped mare and foal, the foal got by Earnest Tom. Mr. Thomas Jones, of Llandrilly, carried off the first prize for the best pair of agricultural horses for some extremely good serviceable animals, and a handsome pair of black horses shown by Mr. John Roberts, of Llandrillo, carried off the second prize. Amongst the other successful competitors for the horse prizes were Mr. Edward Jones, of Gwyddelwern (who took a first prize in the agricultural gelding or filly class for the same animal, which won a first prize at the Edeyrnion Show), Mr. Rice James, of Bettws, Gerll Goch, Mr. Godfrey Parry, of Llanasaintffraid, Mr. Thomas Roberts, of Brynberth, Corwen (who was awarded the special prize of £5, offered by the High Sheriff of Merionethshire, for the best roadster or hack in the yard), Mr. T. Barton, of Llangollen, Mr. J. D. Jarrett, of Trawsfynydd, Mr. Edward Roberts, of Llangollen, Mr. W. Jones, of Llanuwchllyn, and Mr. David Jones, of Dolafawr, Llanuwchllyn.—*Cambrian News*.

MONTGOMERYSHIRE.

The seventh Show of this flourishing Society was held on Sept. 21, in Plas Machynlleth Park, by the kind permission of the Most Honourable the Marquess of Londonderry, K.P., the President of the Society for the year.

The total number of exhibits reached nearly 840, and they were made up of 61 entries for Hereford cattle, 10 Shorthorns, and 73 of other breeds, the cattle numbering altogether 174: but as many of them were "pairs," it represented a much larger number of animals. Of this number the Herefords made up about one-half of the whole of the cattle exhibited. The Herefords were splendid animals in all their classes, and the "white face" were the great favourites over their well-known rivals, the Shorthorns.

The sheep were exhibited in goodly numbers, and there were 182 entries, the great feature of attraction being "the Shrophires; and it is evident this splendid breed of sheep is slowly, but surely, acclimatizing itself to the pastures of the Montgomeryshire hills and valleys. There were 47 entries, but as many of them were pens of "five" the number exhibited was much larger. There were 135 entries for hill sheep and other breeds, and these were many of them pens of five, so that the number of sheep was large.

There were 23 entries of five fleeces each of wool, seven of which were Shrophires, and 16 hill fleeces.

The horses formed a large feature of the Show, and the

prestige attained by Montgomeryshire for its draught horses seems in no way diminished. The total entries for horses, mares and foals, colts, stallions, and ponies, of all kinds, numbered 806. They embraced classes for practical utility, either in agriculture, for harness, or the road, and there were no prizes for fancy horses, such as hunters. Among the extra stock was a rich dark dapple-brown stallion "Nuneaton," 16 hands high, not for competition, exhibited by the Marquess of Londonderry, which attracted great attention, and whose long pedigree from some of the best strains of blood was published in the catalogue, the dates attached to the pedigree going as far back as 1773.

The donkeys were a good class, for which there were 7 entries.

There were 33 entries for pigs of large breed, middle breed, small breed, and any breed, and there were some fine animals amongst them.

The entries for the best-looking sheep dog numbered 37.

There were 13 entries for cheese; 68 for tub and fresh butter; 22 for roots; 35 for grain, including wheat, barley, and oats; and 35 extra prizes for the best two cows, best pen of five mountain-bred ewes &c.—*Abridged from the Shrewsbury Chronicle.*

OSWESTRY DISTRICT.

The sixteenth annual Show of the Oswestry District Agricultural Society was held at Ellesmere on Friday, September 28th. The total amount offered in prizes, including twenty silver cups, was nearly £500, and we are glad to be able to report that the Show, in point, we believe, both of quality and quantity—certainly in point of quality—was the very best the Society has ever had.

At the suggestion of Mr. Mainwaring the prizes usually offered by the President for the best cultivated farms were abandoned, for want of sufficient competition for them, and the money devoted to special prizes for other things. Of the silver cups or pieces of plate offered eight were given by the President. For special prizes offered for the best root crops there were twenty-two competitors.

The exhibition, which comprised horses, cattle, sheep, pigs, poultry, butter, cheese, roots, and implements, was held on a very convenient site near the railway station. The show of horses, sheep, and pigs was held in the Smithfield, and of cattle, poultry, and implements in a field next to it. The horse leaping took place in a field adjoining the station yard, where a grand stand was erected for the spectators of this very popular form of competition. Of the excellence of the Show we have already spoken in general terms. The show of cattle, though not very large, was very good. In the Short-horn premiums there were twenty-five entries, and in the Hereford only fourteen, but amongst the animals shown were some which would have done honour to the Show of a much larger Society. The show of sheep and pigs was, on the whole, extremely creditable. There were fifty-five entries in the sheep class, and nineteen for pigs. Of horses there was a large and excellent show. The number of entries was 124. For the leaping prizes there were nineteen entries. The show of cheese and butter was very small, but fairly good—the butter especially so. There were only nine entries in each of these classes. For roots there were thirty-three entries. The number of entries in the poultry show was 166, and it was, in the opinion of the judge, Mr. Hewitt, the best Show in connection with the Oswestry Society upon which he had ever adjudicated.—*Oswestry Advertiser.*

RADNORSHIRE.

The fifth annual Show of stock and hunters, and the sheep dog trials, under the auspices of the Radnorshire Agricultural Society, took place at Penybont, on Friday, 21st Sept. The Show was held on a large meadow at the rear of the Seven Arms Hotel, the approach to which was over a primitive and shaky foot-bridge across the Ithon. The weather was superb, and it was computed that nearly three thousand visitors were on the Show-ground. The show of stock was in every respect a great improvement upon that of last year, and proved that the Radnorshire farmers are rapidly mastering the secret of prize-winning. Most amateur critics at agricultural Shows are attracted by the larger beasts, their weakness being to confound bulk with quality; but the

animals that are mostly prized are those that are bred so as to reduce the more useless parts of their total weight (the head, extremities, and bones) to a minimum. Dealing with the Show in the order of the catalogue, we will first refer to the horses. There were five entries in Class 1, for stallions for the general purposes of husbandry, the best being entitled to a silver cup of the value of five guineas, the gift of Mr. James Vaughan, the high sheriff of the county. The judges' favour inclined to a fine symmetrical horse, named Welshman, six years, a much younger animal, named Stranger, being awarded the second prize offered by the Society. Only two roadster stallions were entered in Class 2, and they were of sufficient merit to secure the prizes offered by the Society. The pony stallions were a good though small class, the entries numbering only three. In Class 4, for the best mare and foal at foot, there were 11 entries. A fine mare, with good-looking foal at foot, belonging to Mr. E. Farr, Pilleth, specially attracted the judges' attention, and was decorated. The same exhibitor carried off the prize for the best cart sucker. There were twelve entries in Class 6, for the best mare and foal at foot (other than cart), and the prizes were awarded to animals with regard to which many commendations were bestowed by the visitors. Pony mares were also a large class, the entries numbering 10. The two-year-old geldings, two-year-old mares, and yearling colts for the general purposes of husbandry, were well represented in their respective classes, but the entries were not numerous. In Class 12, for the best two-year-old nag, there were 12 entries, and 10 in Class 13 for the best yearling nag. Mr. Henry Lloyd offered a prize of £5 in Class 14, for the best three-year-old pony not exceeding 13 hands. The judges' award went to Mr. J. E. Davies, Wronoly, for his Wild Beauty, a name by no means inappropriate. An objection, however, was lodged against the award, and Tommy, belonging to Mr. E. J. Morris, Gwernaffell, Knighton, was reserved for the prize in case the objection was sustained. There were 13 entries in this class. Of cattle, there was a remarkably fine show. A better collection of well-bred Herefords had not been seen before in any place outside the county from which they take their name. There were no less than 88 entries in the cattle classes, and in very few instances could the beasts be said to be under bred. Radnorshire is becoming as much the home of Herefords as is Hereford itself. The first prize Hereford bull of any age was that shown by Messrs Cobden and Bannerman, of the Grove, Knighton. It was bred by the exhibitors from the celebrated Gwernaffell herd. The age of Latitude Fifth, the bull in question, is 3 years and 8 months, and he is a very heavy, compact, good quality animal. He was in very good company, four or five of the most renowned breeders in the county having sent their best bulls to compete for the prizes in Class 15. The second prize was awarded to Mr. J. B. Roberts, of Badland. In the next Class there were also several animals with sleek and glossy coats, these being Hereford bulls under two years. There were 6 entries, and the awards went to residents in Cefn and Mounaughy. For the prizes offered for the best Hereford bull under one year, 7 competed, Messrs. Cobden and Bannerman again being victorious with a very promising looking bull aged seven months, Mr. E. Farr, Pilleth, being placed second with a neat bull aged four months. Classes 18 to 23 inclusive were for animals from the lower district, and Classes 24 to 31 inclusive were for animals from the upper district. The competition from the two districts was about equal, and the winning animals were of unquestionable merit. The prizes in Classes 30 and 31 for yearling steers and heifers belonging to tenant farmers in the upper district were given by Mr. R. W. Banks. The sheep were remarkably choice, the upper district sending as good specimens as were to be seen from the lower. Classes 32 to 48 inclusive were devoted to sheep, and the competition was very great. The judges had some little difficulty in Class 38 for the best pure-bred Down ram of any age. Eventually the blue badge went to Mr. Morris, Gwernaffell, who was closely pressed by Mr. G. Hamar, Boatside, Glyro. The wethers, though of remarkably good quality, were considered to be rather inferior to those exhibited last year at Penybont. The classes for pigs were well filled, and the animals shown attracted a considerable amount of attention on account of their bulky, solid appearance. The owners evidently believed in the epigram of that eminent scholar who once said, "For every ounce you put into a pig you get a solid return." Prizes, amounting to

10s. each, were awarded by the judges to the exhibitors of the best descriptions of extra stock. The trials of hunters were witnessed with unflagging interest from the commencement to the close of the contests. The course was railed off, plain and gorse-covered hurdles were placed at suitable distances, and the water jump was in the centre of the course. A large number of persons witnessed the jumping from the hill which skirted one side of the course. In Class 1, thirteen hunters, up to 14 stone, competed, the prizes being £10 for the best and £2 10s. for the second best. Another prize of £3 was offered for the best performer. There was no lack of excellent performances. Mr. W. B. Mynor's Brown Bess did her work splendidly, and was adjudged to be the best performer. Mr. S. C. Evans Williams' g.g., Mr. A. E. Williams up, nearly threw the rider at the water jump. Sir R. D. Green-Price's Rector, ridden by Stephens, required much persuasion to take the water jump. St. Crispin, belonging to Captain Otway (Mr. A. E. Williams up), cleared every-

thing, including the hedge, in good style. Lady Jane, the property of Mr. S. C. Evans Williams, was obstinate at the water jump, and being tried a second time made an effort, and managed to get over the hurdle; in doing so she unseated her rider, Mr. A. E. Williams, who fell into the water, but fortunately he was not injured. Mr. S. W. Williams' Pilgrim vaulted over the hurdles in a manner that pleased the spectators, but did not seem to care for the hedge. Captain Otway's Blarney Stone cleared everything before him in remarkably good style, and the judges awarded him the first prize. St. Clara, belonging to Mr. T. P. Williams, Rhayader, refused to jump the hedge till taken to it the fourth time. St. Crispin was awarded the second prize. Class 2 was for hunters under 14 hands 2 in. The prize of £5 was the gift of Mr. S. C. Evans Williams, and a prize of £3 was also given to the best performer in this class. Eight horses competed, and both prizes were awarded to Metz, the property of Mr. R. B. Mynors.—*Hereford Times*.

FROME DAIRY SHOW.

On Wednesday, Sept. 26, the seventh annual Show of dairy produce of the Frome District Agricultural Association was held under very auspicious circumstances, both as regards the weather and the number of entries. These latter were fully one-third larger than at any previous exhibition, and are two-thirds larger in cheese entries than the forthcoming Dairy Show in London; the butter classes were very much smaller than the London ones.

The cheese classes contained 255 entries, the majority of them being cheese of remarkably fine quality. Class I. was a magnificent class, containing as it did 64 entries, the majority of which were deep Cheddars, varying from 18 to 20 inches deep. In this class, as in the succeeding ones, the judges seemed to have a decided preference for new samples, all the prize lots coming under that category, the riper samples being in every case passed over. The first prize was awarded to an evenish lot, light in colour, and yielding kindly to the touch, but which had a slightly sour taste, and was certainly not sufficiently ripe for use. The second was a riper lot; but in our opinion the best lot in the class was an unnoticed lot of dark-skinned, fully-matured cheese, exhibited by Mr. Charles Crees, of Seymour's Court, Beckington, Frome. The class to which the greatest amount of interest usually attaches is the sweepstake open to the whole world; but this was not so important a class this year as usual, owing to the fact that the competition was entirely restricted to the three counties of Somerset, Wilts, and Dorset, no other counties competing. In this restriction of the area of competition we cannot but recognise what may be proved a source of danger to the Frome Society, limiting as it may the beneficial influence which so good a Society and so excellent a Show cannot fail to exercise. It is worthy of note that Mr. Padfield, who last year exhibited at the Kilmarnock Show, winning the prize medal, sends two entries to the present Show, both of which were unnoticed by the judges, the judgment of every one being that they were beaten on their merits.

The butter classes were inferior to those of last year, both in point of numbers and quality. In the fresh butter classes some of the samples, and especially the prize-taking samples, were quite equal to any that have ever been shown, but the average quality of the whole is certainly not equal to that of previous years. Everywhere, however, the arrangement left nothing to be desired, the tasty displays being, we think, superior to those of any previous year. In the cured butter class nearly all the samples shown were not such as would take a first place in any large show. In fact, the judges thought the class so poor that they refrained from giving a single commendation.

In the cheese fair the first-prize lot fully deserved its position. It consisted of 45 cwt. of cheese, similar in character to those to which allusion is made above, exhibited by the same man as in Class I. So far as prices were concerned, Cheddars made from 74s. to 84s. per cwt. of 112lbs., Somersets made from 65s. to 70s., doubles from 60s. to 68s., and half-skims from 50s. to 54s. Business opened slow, farmers expecting more money than dealers were willing to give. About twelve o'clock, however, they gave way, when business became brisk, and nearly every lot pitched changed hands at the above-mentioned prices. Considerably over 200 tons were pitched.

PRIZE LIST.

JUDGES.—CHEESE: Mr. Gibson, Edinburgh; Mr. Hutchingson, London; Mr. Caste, Gloucester; Mr. Watson, Birmingham; and Mr. Giles, Bristol. BUTTER: Mr. Goddard, Gillingham; Mr. W. A. Tisdley, Bath; and Mr. Parfitt, Bath.

CHEESE.

Four cheese, not less than 56 lbs. each (open to the counties of Somerset, Wilts, and Dorset).—First prize, £20, J. Hoddinott, Lippyat, Bath; second, £15, H. Pitman, Sutton Montis, Castle Cary; third, £10, G. Bennett, Erlestoke, Westbury; fourth, £5, C. Mabey, Westbury; fifth, £3, J. Welch, Redlands, Evercreech.

Four cheese (loaf excepted), not exceeding 84 lbs. each, restricted to dairies of 30 cows or under (open to the counties of Somerset, Wilts, and Dorset).—First prize, £10, W. Barritt, North Brewham; second, £6, J. Batt; third, £4, R. Nokes Francis, Westbury; fourth, £3, G. H. Gunning, West Woodlands, Frome.

Four cheese, not less than 28 lbs. each, any system of make (open to the United Kingdom).—First prize, £20, H. Pitman; second, £12, J. Hoddinott; third, £7, G. Bennett; fourth, £5, J. Welch; fifth, £3, C. Stallard, Stanton Wick, Pensford.

LOAF CHEESE COMPETITION.

Ten cheese, not less than 10 lbs. nor more than 16 lbs. each (open to Somerset, Wilts, and Dorset).—First prize, £7, J. Welch; second, £5, F. Phippen; third, £3, H. Pitman.

THIN CHEESE COMPETITION.

Six cheese, not exceeding 30 lbs. each (open to Somerset, Wilts, and Dorset).—First prize, £5, J. Bennett; second, £3, H. Burfitt; third, £3, C. Crees, Beckington, Frome.

Two cheese of any size, made within the district comprised in the Frome Union.—Cap, value £3 3s., C. Crees.

Four cheese, not less than 56 lbs. each (open to the county of Somerset).—First prize, £10, J. Welch; second, £5, J. Hoddinott; third, £3, Mr. Bennett.

Four cheese of any make (sweepstake of £1, open to the world).—First prize, two-thirds (£17 6s. 8d.), J. Wilcox, Shepton Mallet; second, one-third (£8s. 13s. 4d.), G. Bennett; third, one-half the amount of second prize (£1 6s. 8d.), J. Welch.

CHEESE FAIR COMPETITION.

Lot of cheese pitched for sale by a farmer or dairyman, not less than 1 cwt. for every cow in the dairy.—First prize, silver cup, value £5 5s. and £6, C. Cress, Beckington; second, £4, E. Parrott, St. Algar's Farm, Frome; third, £3, C. Cress, Maiden Bradley, Frome.

BUTTER.

Cured butter, not less than 28 lbs. (open to the United Kingdom).—First prize, £7, G. Bull, Martock; second, £4, Mrs. Lea, Stratton College, near Bath; third, £2, C. Osborne, Milbrook Farm, Sherborne; fourth, £1, Mrs. Brake, Frome St. Quinton, Cattistock, Dorset.

Fresh butter, not less than 6 lbs., made in dairies where no cow nor heifer in milk of any Channel Island or Norman breed is kept, printed in half-pounds (open to the United Kingdom).—First prize, £5, A. Ashford, Fifehead, Magdalen, Gillingham, Dorset; second, £3, S. Sims, Ansford, Castle Cary; third, £2, W. J. George, Newelose Farm, Frome; fourth, £1, J. Cress, Cloford House, Frome.

Fresh butter, not less than 6 lbs., made from the produce of cows of any breed, printed in half-pounds (open to the United Kingdom).—First prize, £5, Mrs. Tapp, Fairfield, Bradford, Wilts; second, £3, J. Holley, servant to Captain Gibney, Bradford, Wilts; third, £2, G. Jarvis, Kilmington.

MIDLAND FARMERS' CLUB.

A general meeting of members was held at the Midland Hotel, New-street, on September 27th, Mr. A. Hodgson in the chair.

Mr. G. LINDSEY read a paper, entitled "A few Features of American Farming," the result of a brief visit paid to the United States twelve months ago. He said he proposed to show, by a few notes of travel and observation, some matters of interest in the agriculture of what had been aptly styled the greatest food-producing nation in the world. The farmers of America constituted one-half the population, and during the time of a disastrous civil war, which resulted in the utter abolition of slavery and the complete disorganisation of the labour market, there never was any serious conflict between the United States farmers and their labourers. After giving statistics as to the food-producing capabilities of each State, Mr. Lindsey stated that the agricultural report for the present year indicated that the crops of wheat were generally good. Referring to the grasshopper and the Colorado beetle, he said he was far from underrating the destructive powers of the latter or the danger of its presence among our potato crops. It was an undoubted fact that if a single pair were allowed to increase without molestation for one season, the result would amount to over sixty millions. Professor Brewer, however, had informed him that the American farmers did not apprehend that the beetle was going to be a permanent scourge. They felt assured that when the insect became abundant its natural enemies would become abundant too, and that the latter, though not equal to the task of complete extermination, would keep the pest in a wholesome check. The growth of the cattle trade had made great strides during the last half of the century. The first importations of Shorthorns made with any design of improving American cattle were received at the beginning of this century. Forty years ago a company was started in Ohio for introducing cattle into the West, on a large scale, and gave an impetus to what the Americans called "cattle industry," which had since been rapid, the Americans now seeking to supply the beef-eaters of the old country with dead meat. As a rule, the animals which made this beef were well-grown young stock, seldom above three years old. They were fed for the most part on the rich grass lands of the country, and doubtless contained all the elements of good food. In America a considerable number of animals were killed for their skins, horns, and fat. There was, however, a ready home market for the fat, which was sold to the proprietors of certain factories, where it was turned out as butter, labelled "choicest creamery." The traffic in bogus butter, or "oleo-margarine," had assumed such proportions that a law was lately passed for the protection of dairymen by preventing deception in the sale of butter. There was in England a growing taste for the better qualities of American cheese, but its consumption in the States was extremely small, for the

Yankees were not a cheese-eating people. Much attention was given to the breeding of horses, and he could say from experience that horses in America were well fed, lightly worked, regularly groomed, and rarely, if ever, beaten or ill-treated. The most important organisation which affected American agriculture was an Order named "The Grange," which was a kind of farmers' freemasonry. At its meetings, which were attended by both men and women, matters conducive to the interests of all were freely discussed, and the result was that every member was benefited. As a body the farmers of the United States were enabled to exercise that influence in the affairs of the country to which their numbers entitled them.

Mr. HOUGHTON said a number of years ago he went to America for the purpose of settling in that country as a farmer. He found, however, the climate was so cold that it was impossible to grow swedes in order to maintain a flock of sheep in the winter. He was aware that in the Western States of America land could be obtained at a very cheap rate, but they must remember it was virgin land and required ploughing deeper and deeper every year. The Americans produced a great deal of corn because it paid best, although in the old States a large number of cattle were kept for dairy purposes. The chief feature of American farming was that labour-saving machines were used for everything required to be done on the farm. He was aware they had labour-saving machines in England, but the number was nothing compared with what were employed in America. The importation of meat was very easy of explanation. Stock might be bought at a very low rate, and after being fed on the boundless prairies, sent to New York in capital condition, and finally sent to Europe. His opinion was that American beef was delicious, as well as the pork, but the veal and mutton were indifferent.

Mr. LOWE, who remarked that enterprising Americans were formidable competitors with ourselves, not only in agricultural but in manufacturing pursuits, proposed a vote of thanks to Mr. Lindsey for his paper, which was seconded by Mr. WISE, and passed *nem. con.*

THE EARL OF KIMBERLEY ON THE LABOUR QUESTION AND COUNTY BOARDS.

At the annual dinner of the North Walsham Agricultural Association, held on October 3rd, the Earl of Kimberley presided. In the course of a speech made in response to a toast in his honour, he said:—With regard to the agricultural labour question, farmers had, after all, been only passing through a similar ordeal to that which had been sustained by other employers of labour throughout the country. He believed agricultural labourers possessed an average amount of good, sound common sense, and he was not at all sure that they would be found more difficult to deal with than the artisans of the great towns, although we were sometimes told that the latter were more intelligent. Upon the question of County Boards he thought it desirable that the system of municipal representative institutions at present existing in towns should be extended to counties. He did not think there was much to complain of in the present administration of county affairs by magistrates assembled in Quarter Sessions, but he considered it desirable that our local institutions should be strengthened and refreshed by the establishment of County Boards, instead of Parliament creating some new department or placing more business in the hands of some existing departments already too much occupied. He should, therefore, be glad if the present Government would accept in principle the measure of Mr. Read, whose opinions upon this County Board question were entitled to much respect. He hailed with pleasure the assurance that the Government intended to take the matter in hand, and he believed that the Government would receive considerable support from the Opposition if they attempted to settle the question in a satisfactory manner.

PROFESSOR TYNDALL ON SCIENCE.

The following address was delivered by Professor Tyndall on Monday, Oct. 1, at Birmingham, as President of the Midland Institute:—

"A magnet attracts iron, but when we analyse the effect we learn that the metal is not only attracted but repelled, the final approach to the magnet being due to the difference of two unequal and opposing forces. Social progress is for the most part typified by this duplex or polar action. As a general rule, every advance is balanced by a partial retreat, every amelioration is associated more or less with deterioration. No great mechanical improvement, for example, is introduced for the benefit of society at large that does not bear hardly upon individuals. Science, like other things, is subject to the operation of this polar law, what is good for it under one aspect being bad for it under another. Science demands above all things personal concentration. Its home is the study of the mathematician, the quiet laboratory of the experimenter, and the cabinet of the meditative observer of nature. Different atmospheres are required by the man of science, as such, and the man of action. The atmosphere, for example, which vivifies and stimulates your excellent representative, Mr. Chamberlain, would be death to me. There are organisms which flourish in oxygen—he is one of them. There are also organisms which demand for their duller lives a less vitalising air—I am one of these. Thus the facilities of social and international intercourse, the railway, the telegraph, and the post-office, which are such undoubted boons to the man of action, react to some extent injuriously on the man of science. Their tendency is to break up that concentrativeness which, as I have said, is an absolute necessity to the scientific investigator. The men who have most profoundly influenced the world from the scientific side have habitually sought isolation. Faraday, at a certain period of his career, formally renounced dining out. Darwin lives apart from the bustle of the world in his quiet home in Kent. Mayer and Joule dealt in unobtrusive retirement with the weightiest scientific questions. None of these men, to my knowledge, ever became Presidents of the Midland Institute or of the British Association. They could not fail to know that both positions are posts of honour, but they would also know that such positions cannot be filled without grave disturbance of that sequestered peace which, to them, is a first condition of intellectual life. There is, however, one motive power in the world which no man, be he a scientific student or otherwise, can afford to treat with indifference, and that is the cultivation of right relations with his fellow-men—the performance of his duty, not as an isolated individual, but as a member of society. Such duty often requires the sacrifice of private ease to the public wishes, if not to the public good. From this point of view the invitation conveyed to me more than once by your excellent senior Vice-President was not to be declined. It was an invitation written with the earnestness said to be characteristic of a Radical, and certainly with the courtesy characteristic of a gentleman. It quickened within me the desire to meet in a cordial and brotherly spirit the wish of an institution of which not only Birmingham, but England, may well be proud, and of whose friendliness to myself I had agreeable evidence in the letters of Mr. Thackeray Bence. To look at his picture as a whole a painter requires distance, and to judge of the total scientific achievement of any age the standpoint of a succeeding age is desirable. We may, however, transport ourselves in idea into the future, and thus obtain a grasp, more or less complete, of the science of our time. We sometimes hear it decanted and contrasted to its disadvantage with the science of other times. I do not think that this will be the verdict of posterity. I think, on the contrary, that posterity will acknowledge that in the history of science no higher samples of intellectual conquest are recorded than those which this age has made its own. One of the most salient of these I propose, with your permission, to make the subject of our consideration during the coming hour. It is now generally admitted that the man of to-day is the child and product of incalculable antecedent time. His physical and intellectual textures have been woven for him during his passage through phases of history and forms of existence which lead the mind back to an abysmal past. One of the qualities which

he has derived from that past is the yearning to let in the light of principles on the otherwise bewildering flux of phenomena. He has been described by the German Lichtenberg as 'das rastlose Urwesensthier'—the restless, cease-seeking animal—in whom facts excite a kind of hunger to know the sources from which they spring. Never, I venture to say, in the history of the world, has this longing been more liberally responded to, both among men of science and the general public, during the last 30 or 40 years. I say 'the general public,' because it is a feature of our time that the man of science no longer limits his labours to the society of his colleagues and his peers, but shares, as far as it is possible to share, with the world at large the fruits of inquiry. The celebrated Robert Boyle regarded the universe as a machine; Mr. Carlyle prefers regarding it as a tree. He loves the image of the umbrageous Igdrazil better than that of the Strasburg clock. A machine may be defined as an organism with life and direction outside; a tree may be defined as an organism with life and direction within. In the light of these definitions, I close with the conception of Carlyle. The order and energy of the universe I hold to be inherent, and not imposed from without—the expression of fixed law and not of arbitrary will, exercised by what Carlyle would call an Almighty clockmaker. But the two conceptions are not so much opposed to each other after all. In one essential particular they, at all events, agree. They equally imply the interdependence and harmonious interaction of parts, and the subordination of the individual powers of the universal organism to the working of the whole. Never were the harmony and interdependence just referred to so clearly reorganised as now. Our insight regarding them is not that vague and general insight to which our fathers had attained, and which, in early times, was more frequently affirmed by the synthetic poet than by the scientific man. The interdependence of our day has become quantitative—expressible by numbers—leading, it must be added, directly into that inextinguishable reign of law which so many gentle people regard with dread. In the domain now under review men of science had first to work their way from darkness into twilight, and from twilight into day. There is no solution of continuity in science. It is not given to any man, however endowed, to rise spontaneously into intellectual splendour without the passage of antecedent thought. Great discoveries grow. Here, as in other cases, we have first the seed, then the ear, then the full corn in the ear, the last member of the series implying the first. Thus, as regards the discovery of gravitation, with which the name of Newton is identified, notions more or less clear concerning it had entered many minds before Newton's transcendent mathematical genius raised it to the level of a demonstration. The whole of his deductions, moreover, rested upon the inductions of Kepler. Newton shot beyond his predecessors, but his thoughts were rooted in their thoughts, and a just distribution of merit would assign to them a fair portion of the honour of discovery. Scientific theories some times float like rumours in the air before they receive definite expression. The doom of a doctrine is often practically sealed, and the truth of one is often practically accepted, long prior to the theoretic demonstration of either the error or the truth. Perpetual motion, for example, was discarded before it was proved to be in opposition to natural law; and as regards the connection and interaction of natural forces, prenatal intimations of modern discoveries and results are strewn through scientific literature. Confining ourselves to recent times, Dr. Ingleby has pointed out to me some singularly sagacious remarks bearing upon this question which were published by an anonymous writer in 1830. Roger's penetration was conspicuous in 1839. Mohr had grasped, in 1837, some deep-lying truth. The writings of Faraday furnish recent illustrations of his profound belief in the unity of nature. 'I have long,' he writes in 1845, 'held an opinion almost amounting to conviction, in common, I believe, with other lovers of natural knowledge, that the various forms under which the forces of matter are made manifest have one common origin, or, in other words, are so directly related and mutually dependent, that they are convertible, as it were, one into another, and possess equivalence of power in their action.' His own researches on magneto-electricity, on electro-

chemistry and on the magnetization of light led him directly to this belief. At an early date Mr. Justice Grove made his mark upon this question. Colding, though starting from a metaphysical basis, grasped eventually the relation between heat and mechanical work, and sought to determine it experimentally. And here let me say that to him who has only the truth at heart, and who in his dealings with scientific history keeps his soul unwarped by envy, hatred, or malice, personal or national, every fresh accession to historic knowledge must be welcome. For every newcomer of proved merit, more especially if that merit should have been previously overlooked, he makes ready room in his recognition or his reverence. But no retrospect of scientific literature has as yet brought to light a claim which can sensibly affect the positions accorded to two great Pathfinders, whose names in relation to this subject are linked in indissoluble association. These names are Julius Robert Mayer and James Prescott Joule. In his essay on 'Circles' Mr. Emerson, if I remember rightly, pictured intellectual progress as rhythmic. At a given moment knowledge is surrounded by a barrier which marks its limit. It gradually gathers clearness and strength until, by-and-by, some thinker of exceptional power bursts the barrier and wins a wider circle, within which thought once more intrenches itself. But the internal force again accumulates, the new barrier is in its turn broken, and the mind finds itself surrounded by a still wider horizon. Thus, according to Emerson, knowledge spreads by intermittent victories instead of progressing at a uniform rate. When Dr. Joule first proved that a weight of one pound, falling through a height of 778 ft., generated an amount of heat competent to warm a pound of water one degree Fahrenheit, and that in lifting the weight so much heat exactly disappeared, he broke an Emersonian 'circle,' releasing by the act an amount of scientific energy which rapidly ever-ran a vast domain. Helmholtz, Clausius, Thomson, Rankine, Regnault, Favre, and other illustrious names are associated with the conquests since achieved and embodied in the great doctrine known as the 'Conservation of Energy.' This doctrine recognizes in the material universe a constant sum of power made up of items among which the most Protean fluctuations are incessantly going on. It is as if the body of nature were alive, the thrill and interchange of its energies resembling those of an organism. The parts of the 'stupendous whole, shift and change, augment and diminish, appear and disappear, while the total of which they are the parts remains quantitatively immutable—immutable, because when change occurs it is always polar—*plus* accompanies *minus*, gain accompanies loss, no item varying in the slightest degree without an absolutely equal change of some other item in the opposite direction. The sun warms the tropical ocean, converting a portion of its liquid into vapour, which rises in the air and is recondensed on mountain heights, returning in rivers to the ocean from which it came. Up to the point where condensation begins as amount of heat exactly equivalent to the molecular work of vaporization and the mechanical work of lifting the vapour to the mountain-tops has disappeared from the universe. What is the gain corresponding to this loss? It will seem when mentioned to be expressed in a foreign currency. The loss is a loss of heat; the gain is a gain of distance, both as regards masses and molecules. Water which was formerly at the sea-level has been lifted to a position from which it can fall; molecules which had been locked together as a liquid are now separate as vapour which can recondense. After condensation gravity comes into effectual play, pulling the showers down upon the hills, and the rivers thus created through their gorges to the sea. Every raindrop which smites the mountain produces its definite amount of heat; every river in its course develops heat by the clash of its cataracts and the friction of its bed. In the act of condensation, moreover, the molecular work of vaporization is accurately reversed. Compare, then, the primitive loss of solar warmth with the heat generated by the condensation of the vapour, and by the subsequent fall of the water from cloud to sea. They are mathematically equal to each other. No particle of vapour was formed and lifted without being paid for in the currency of solar heat; no particle returns as water to the sea without the exact quantitative restitution of that heat. There is nothing gratuitous in physical nature, no expenditure without equivalent gain, no gain without equivalent expenditure. With inexorable constancy the one accompanies the other, leaving no nook or crevice be-

tween them for spontaneity to mingle with the pure and necessary play of natural force. Has this uniformity of nature ever been broken? The reply is "Not to the knowledge of science." What has been here stated regarding heat and gravity applies to the whole of inorganic nature. Let us take an illustration from chemistry. The metal zinc may be burnt in oxygen, a perfectly definite amount of heat being produced by the combustion of a given weight of the metal. But zinc may also be burnt in a liquid which contains a supply of oxygen—in water for example. It does not in this case produce flame or fire, but it does produce heat which is capable of accurate measurement. But the heat of zinc burnt in water falls short of that produced in pure oxygen, the reason being that to obtain its oxygen from the water the zinc must first dislodge the hydrogen. It is in the performance of this molecular work that the missing heat is absorbed. Mix the liberated hydrogen with the oxygen and cause them to recombine; the heat developed is mathematically equal to the missing heat. Thus in pulling the oxygen and hydrogen asunder an amount of heat is consumed which is accurately restored by their reunion. This may be taken as prefatory to a few remarks upon the Voltaic battery. It is not my design to dwell upon the technic features of this wonderful instrument, but simply to illustrate by means of it the farther play of the principle of equivalence and conservation, and to show the varying shapes which a given amount of energy can assume while maintaining unvarying quantitative stability. When that form of power which we call an electric current passes through Grove's battery, zinc is consumed in acidulated water, and in the battery we are able so to arrange matters that when no current passes no zinc shall be consumed. Now the current, whatever it may be, possesses the power of generating heat outside the battery. We can fuse with it iridium, the most refractory of metals, or we can produce with it the dazzling electric light, and hat at any terrestrial distance from the battery itself. We will now, however, content ourselves with causing the current to raise a given length of platinum wire, first to a blood-heat, then to redness, and finally to a white heat. The heat under these circumstances generated in the battery by the combustion of a fixed quantity of zinc is no longer constant, but it varies inversely as the heat generated outside. If the outside heat be *nil*, the inside heat is a *maximum*; if the external wire be raised to a blood-heat, the internal heat falls slightly short of the *maximum*. If the wire be rendered red-hot the quantity of missing heat within the battery is greater, and if the external wire be rendered white-hot, the defect is greater still. Add together the internal and external heat produced by the combustion of a given weight of zinc, and you have an absolutely constant total. The heat generated without is so much lost within, the heat generated within is so much lost without, the polar changes already adverted to coming here conspicuously into play. Thus, in a variety of ways, we can distribute the items of a never-varying sum, but even the subtle agency of the electric current places no creative power in our hands. Instead of generating external heat we may cause the current to effect chemical decomposition at a distance from the battery. Let it, for example, decompose water into oxygen and hydrogen. The heat generated in the battery, under these circumstances by the combustion of a given weight of zinc falls short of what is produced when there is no decomposition. How far short? The question admits of a perfectly exact answer. When the oxygen and hydrogen recombine, the heat absorbed in the decomposition is accurately restored, and it is exactly equal in amount to that missing in the battery. We may, if we like, bottle up the gases, carry in this form the heat of the battery to the Polar Regions, and liberate it there. The battery, in fact, is a hearth on which fuel is consumed, but the heat of the combustion, instead of being confined in the usual manner to the hearth itself, may be first liberated at the other side of the world. In my youth I thought an electro-magnetic engine which was shown to me a veritable perpetual motion—a machine, that is to say, which performed work without the expenditure of power. Let us consider the action of such a machine. Suppose it to be employed to pump water from a lower to a higher level. On examining the battery which works the engine we find

that the zinc consumed does not yield its full amount of heat. The quantity of heat thus missing within is the exact thermal equivalent of the mechanical work performed without. Let the water fall again to a lower level, it is warmed by the fall. Add the heat thus produced to that generated by the friction, mechanical and magnetical, of the engine, we thus obtain the precise amount of heat missing in the battery. All the effects obtained from the machine are thus strictly paid for, this "payment for results" being, I would repeat, the inexorable method of nature. No engine, however subtly devised, can evade this law of equivalence, or perform on its own account the smallest modicum of work. The machine distributes, but it cannot create. Is the animal body, then, to be classed among machines? When I lift a weight, or throw a stone, or climb a mountain, or wrestle with my comrade, am I not conscious of actually creating and expending force? Let us look to the antecedents of this force. We derive the muscle and fit of our bodies from what we eat. Animal heat you know to be due to the slow combustion of this fuel. My arm is now inactive, and the ordinary slow combustion of my blood and tissue is going on. For every grain of fuel thus burnt a perfectly definite amount of heat has been produced. I now contract my biceps muscle without causing it to perform external work. The combustion is quickened and the heat is increased, this additional heat being liberated in the muscle itself. I lay hold of a 166lb. weight, and by the contraction of my biceps lift it through the vertical space of a foot. The blood and tissues consumed during this contraction have not developed in the muscle their due amount of heat. A quantity of heat is at this moment missing in my muscle which would raise the temperature of an ounce of water somewhat more than one degree Fahrenheit. I liberate the weight, it falls to the earth, and, by its collision, generates the precise amount of heat missing in the muscle. My muscular heat is thus transferred from its local hearth to external space. The fuel is consumed in my body, but the heat of combustion is produced outside my body. The case is substantially the same as that of the Voltaic battery when it performs external work or produces external heat. All this points to the conclusion that the force we employ in muscular exertion is the force of burning fuel and not of creative will. In the light of these facts the body is seen to be as incapable of generating energy without expenditure [as the solids and liquids of the Voltaic battery. The body, in other words, falls into the category of machines. We can do with the body all that we have already done with the battery—heat platinum wires, decompose water, magnetize iron, and deflect a magnetic needle. The combustion of muscle may be made to produce all these effects, as the combustion of zinc may be caused to produce them. By turning the handle of a magneto-electric machine a coil of wire may be caused to rotate between the poles of a magnet. As long as the two ends of the coil are unconnected we have simply to overcome the ordinary inertia and friction of the machine in turning the handle. But the moment the two ends of the coil are united by a thin platinum wire a sudden addition of labour is thrown upon the turning arm. When the necessary labour is expended its equivalent immediately appears. The platinum wire glows. You can readily maintain it at a white heat or even fuse it. This is a very remarkable result. From the muscles of the arm, with a temperature of 100 deg., we extract the temperature of molten platinum, which is many thousand degrees. The miracle here is the reverse of that of the burning bush mentioned in Genesis. There the bush burned but was not consumed, here the blood is consumed but does not burn. The similarity of the action with that of the Voltaic battery when it heats an external wire is too obvious to need pointing out. When the machine is used to decompose water, the heat of the muscle, like that of the battery, is consumed in molecular work, being fully restored when the gases recombine. As before, also, the transmuted heat of the muscles may be bottled up, carried to the Polar Regions, and there restored to its pristine form. The matter of the human body is the same as that of the world around us, and here we find the forces of the human body identical with those of inorganic nature. Just as little as the Voltaic battery is the animal body a creator of force. It is an apparatus exquisite and

effectual beyond all others in transforming and distributing the energy with which it is supplied, but it possesses no creative power. Compared with the notions previously entertained regarding the play of 'vital force,' this is a great result. The problem of vital dynamics has been described by a 'competent authority as the 'grandest of all.' I subscribe to this opinion, and honour correspondingly the man who first successfully grappled with the problem. He was no Pope in the sense of being infallible, but he was a man of genius whose work will be held in honour as long as science endures; I have already named him in connection with our illustrious countryman Dr. Joule. Other eminent men took up this subject subsequently and independently; but all that has been done hitherto enhances, instead of diminishing, the merits of Dr. Mayer. Consider the vigour of his reasoning. 'Beyond the power of generating internal heat, the animal organism can generate heat external to itself. A blacksmith by hammering can warm a nail, and a savage by friction can heat wood to its point of ignition. Unless, then, we abandon the physiological axiom that the animal body cannot create heat out of nothing, we are driven to the conclusion that it is the total heat, within and without, that ought to be regarded as the real calorific effect of the oxidation within the body.' Mayer, however, not only states the principle, but illustrates numerically the transfer of muscular heat to external space. A bowler who imparts a velocity of 30 ft. to an 8lb. ball consumes in the act 1-10th of a grain of carbon. The heat of the muscle is here distributed over the track of the ball, being developed there by mechanical friction. A man weighing 150lb. consumes in lifting his own body to a height of 8 ft. the heat of a grain of carbon. Jumping from this height the heat is restored. The consumption of 2 oz. 4 drs. 20 grs. of carbon would place the same man on the summit of a mountain 10,000 ft. high. In descending the mountain an amount of heat equal to that produced by the combustion of the foregoing amount of carbon is restored. The muscles of a labourer whose weight is 150lb. weigh 64lb. When dried they are reduced to 15lb. Were the oxidation corresponding to a day labourer's ordinary work exerted on the muscles alone, they would be wholly consumed in 80 days. Were the oxidation necessary to sustain the heart's action concentrated on the heart itself it would be consumed in eight days. And if we confine our attention to the two ventricles, their action would consume the associated muscular tissue in three days and a half. With a fulness and precision of which this is but a sample did Mayer, between 1842 and 1845, deal with the great question of vital dynamics. We place, then, food in our stomachs as so much combustible matter. It is first dissolved by purely chymical processes, and the nutritive fluid is poured into the blood. Here it comes into contact with atmospheric oxygen admitted by the lungs. It unites with the oxygen as wood or coal might unite with it in a furnace. The matter products of the union, if I may use the term, are the same in both cases—viz., carbonic acid and water. The force products are also the same—heat within the body, or heat and work outside the body. Thus far every action of the organism belongs to the domain either of physics or of chymistry. But you saw me contract the muscle of my arm. What enabled me to do so? Was it or was it not the direct action of my will? The answer is, the action of the will is mediate, not direct. Over and above the muscles the human organism is provided with long whitish filaments of medullary matter, which issue from the spinal column, being connected by it on the one side with the brain, and on the other side losing themselves in the muscles. Those filaments or cords are the nerves, which you know are divided into two kinds, sensor and motor, or, if you like the terms better, afferent and efferent nerves. The former carry impressions from the external world to the brain; the latter convey the behests of the brain to the muscles. Here, as elsewhere, we find ourselves aided by the sagacity of Mayer, who was the first to clearly formulate the part played by the nerves in the organism. Mayer saw that neither nerves nor brain, nor both together, possessed the energy necessary to animal motion; but he also saw that the nerve could lift a latch and open a door by which floods of energy are let loose. 'As an engineer,' he says with admirable lucidity, 'by the motion of his finger in opening a valve or loosening a detent can liberate an amount of mechanical energy almost infinite compared with its exciting cause, so the nerves, acting on the

muscles, can unlock an amount of power out of all proportion to the work done by the nerves themselves.' The nerves, according to Mayer, pull the trigger, but the gunpowder which they ignite is stored in the muscles. This is the view now universally entertained. The quickness of thought has passed into a proverb, and the notion that any measurable time elapsed between the infliction of a wound and the feeling of the injury would have been rejected as preposterous 30 years ago. Nervous impressions, notwithstanding the results of Haller, were thought to be transmitted, if not instantaneously, at all events with the rapidity of electricity. Hence, when Helmholtz, in 1851, affirmed, as the result of experiment, nervous transmission to be a comparatively sluggish process, very few believed him. His experiments may now be made in the lecture room. Sound in air moves at the rate of 1,100 ft. a second; sound in water moves at the rate of 4,000 ft. a second; light in ether moves at the rate of 190,000 miles a second, and electricity in free wires moves probably at the same rate. But the nerves transmit their messages at the rate of only 70 ft. a second, a progress which in these quick times might well be regarded as intolerably slow. Your townsman, Mr. Gore, has produced by electrolysis a kind of antimony which exhibits an action strikingly analogous to that of nervous propagation. A rod of this antimony is in such a molecular condition that when you scratch or heat one end of the rod the disturbance propagates itself before your eyes to the other end, the onward march of the disturbance being announced by the development of heat and fumes along the line of propagation. In some such way the molecules of the nerves are successively overthrown; and if Mr. Gore could only devise some means of winding up his exhausted antimony, as the nutritive blood winds up exhausted nerves, the comparison would be complete. The subject may be summed up, as Du Bois-Reymond has summed it up, by reference to the case of a whale struck by a harpoon in the tail. If the animal were 70 ft. long a second would elapse before the disturbance could reach the brain. But the impression after its arrival has to diffuse itself and throw the brain into the molecular condition necessary to consciousness. Then, and not till then, the command to the tail to defend itself is shot through the motor nerves. Another second must elapse before the order reaches the tail, so that more than two seconds transpire between the infliction of the wound and the muscular response of the part wounded. The interval required for the kindling of consciousness would probably more than suffice for the destruction of the brain by lightning or even by a rifle bullet. Before the organ can arrange itself, it may, therefore, be destroyed, and in such a case we may safely conclude that death is painless. The experiences of common life supply us with copious instances of the liberation of vast stores of muscular power by infinitesimal 'priming' of the muscles by the nerves. We all know the effect produced on a 'nervous' organisation by a slight sound which causes affright. An aerial wave the energy of which would not reach a minute fraction of that necessary to raise the thousandth of a grain through the thousandth of an inch, can throw the whole human frame into a powerful mechanical spasm, followed by violent respiration and palpitation. The eye, of course, may be appealed to as well as the ear. Of this the lamented Lange gives the following vivid illustration: A merchant sits complacently in his easy chair, not knowing whether smoking, sleeping, newspaper reading, or the digestion of food occupies the largest portion of his personality. A servant enters the room with a telegram bearing the words, 'Antwerp. &c. . . . Jonas and Co. have failed.' 'Tell James to harness the horses!' The servant flies. Up starts the merchant wide-awake, makes a dozen paces through the room, descends to the counting-house, dictates letters, and forwards despatches. He jumps into his carriage, the horses snort, and their driver is immediately at the Bank, or on the Bourse, and among his commercial friends. Before an hour has elapsed he is again at home, where he throws himself once more into his easy chair with a deep-drawn sigh, 'Thank God I am protected against the worst, and now for further reflection!' This complex mass of action, emotional, intellectual, and mechanical, is evoked by the impact upon the retina of the infinitesimal waves of light coming from a few pencil marks on a bit of paper. We have, as Lange says, terror, hope, sensation, calculation, possible ruin, and victory compressed into a moment. What caused the merchant to spring out of his chair? The contraction of his muscles. What made his muscles contract? An impulse of

the nerves, which lifted the proper latch, and liberated the muscular power. Whence this impulse? From the centre of the nervous system. But how did it originate there? This is the critical question. The aim and effort of science is to explain the unknown in terms of the known. Explanation, therefore, is conditioned by knowledge. You have probably heard the story of the German peasant who, in early railway days, was taken to see the performance of a locomotive. He had never known carriages to be moved except by animal power. Every explanation outside of this conception lay beyond his experience, and could not be invoked. After long reflection, therefore, and seeing no possible escape from the conclusion, he exclaimed confidently to his companion, 'Es müssen doch Pferde drin sein.' 'There must be horses inside.' Amusing as this locomotion theory may seem it illustrates a deep-lying truth. With reference to our present question, some may be disposed to press upon me such considerations as these:—Your motor nerves are so many speaking-tubes, through which messages are sent from the man to the world; and your sensor nerves are so many conduits through which the whispers of the world are sent back to the man. But you have not told us where is the man. Who or what is it that sends and receives those messages through the bodily organism? Do not the phenomena point to the existence of a self within a self, which acts through the body as through a skilfully constructed instrument? You picture the muscles as hearkening to the commands sent through the motor nerves, and you picture the sensor nerves as the vehicles of incoming intelligence; are you not bound to supplement this mechanism by the assumption of an entity which uses it? In other words are you not forced by your own exposition into the hypothesis of a free human soul? That hypothesis is offered as an explanation or simplification of a series of phenomena more or less obscure. But adequate reflection shows that instead of introducing light into our minds it increases our darkness. You do not in this case explain the unknown in terms of the known, which, as stated above, is the method of science, but you explain the unknown in terms of the more unknown. The warrant of science extends only to the statement that the terror, hope, sensation and calculation of Lange's merchant are psychical phenomena produced by or associated with the molecular motions set up by the waves of light in a previously prepared brain. But the scientific view is not without its own difficulties. We here find ourselves face to face with a problem which is the theme, at the present moment, of profound and subtle controversy. What is the causal connection, if any, between the objective and the subjective—between molecular motions and states of consciousness? My answer is, I know not, nor have I as yet met any body who knows. It is no explanation to say that the objective and subjective effects are two sides of one and the same phenomenon. Why should the phenomenon have two sides? This is the very core of the difficulty. There are plenty of molecular motions which do not exhibit this two-sidedness. Does water think or feel when it runs into frost-ferns upon a window pane? If not, why should the molecular motion of the brain be yoked to this mysterious companion—consciousness? We can present to our minds a coherent picture of the physical processes—the stirring of the brain, the thrilling of the nerves, the discharging of the muscles, and all the subsequent mechanical motions of the organism. But we can present no picture of the process whereby consciousness emerges either as a necessary link or as an accidental by-product of this series of actions. Yet it certainly does emerge—molecular motion produces consciousness. The reverse process of the production of motion by consciousness is equally unrepresentable to the mind. We are here, in fact, upon the boundary line of our intellectual powers, where the ordinary canons of science fail to extricate us from our difficulties. If we are true to these canons we must deny to subjective phenomena all influence on physical processes. The latter must be regarded as complete in themselves. Physical science offers no justification for the notion that molecules can be moved by states of consciousness; and it furnishes just as little countenance to the conclusion that states of consciousness can be generated by molecular motion. Frankly stated, we have here to deal with facts almost as difficult to be seized mentally as the idea of a soul. And if you are content to make your 'soul' a poetic rendering of a phenomenon which refuses the yoke of ordinary mechanical laws, I, for one, would not object to this exercise of ideality. Amid all our speculative uncertainty there is one

practical point as clear as the day—namely, that the brightness and the usefulness of life, as well as its darkness and disaster, depend to a great extent upon our own use or abuse of this miraculous organ. We now stand face to face with the final problem. It is this. Are the brain, and the moral and intellectual processes known to be associated with the brain—and, as far as our experience goes, indissolubly associated—subject to the laws which we find paramount in physical nature? Is the will of man, in other words, free, or are it and nature equally 'bound fast in fate?' From this latter conclusion, after he had established it to the entire satisfaction of his understanding, the great German thinker Fichte recoiled. You will find the record of this struggle between head and heart in his book, entitled 'Die Bestimmung des Menschen'—'The Vocation of Man.' Fichte was determined at all hazards to maintain his freedom, but the price he paid for it indicates the difficulty of the task. To escape from the iron necessity seen everywhere reigning in physical nature, he turned defiantly round upon nature and law, and affirmed both of them to be the products of his own mind. He was not going to be the slave of a thing which he had himself created. There is a good deal to be said in favour of this view, but few of us probably would be able to bring into play the solvent transcendentalism whereby Fichte melted his chains. Why do some of us regard this notion of necessity with terror, while others do not fear it at all? Has not Carlyle somewhere said that a belief in destiny is the bias of all earnest minds? 'It is not nature,' says Fichte; 'it is freedom itself by which the greatest and most terrible disorders incident to our race are produced. Man is the cruellest enemy of man.' But the question of moral responsibility here emerges, and it is the possible loosening of this responsibility that so many of us dread. The notion of necessity certainly failed to frighten Bishop Butler. He thought it untrue, but he did not fear its practical consequence. He showed, on the contrary, in the 'Analogy,' that as far as human conduct is concerned the two theories of free will and necessity come to the same in the end. What is meant by free will? Does it imply the power of producing events without antecedents—of starting as it were upon a creative tour of occurrences without any impulse from within or from without? Let us consider the point. If there be absolutely or relatively no reason why a tree should fall, it will not fall; and if there be absolutely or relatively no reason why a man should act, he will not act. It is true that the united voice of this assembly could not persuade me that I have not, at this moment, the power to lift my arm if I wished to do so. Within this range the conscious freedom of my will cannot be questioned. But what about the origin of the 'wish?' Are we, or are we not, complete masters of the circumstances which create our wishes, motives, and tendencies to action? Adequate reflection will, I think, prove that we are not. What, for example, have I to do with the generation and development of that which some will consider my total being, and others a most potent factor of my total being—the living, speaking organism which now addresses you? As stated at the beginning of this discourse, my physical and intellectual textures were woven for me, not by me. Processes in the conduct or regulation of which I had no share have made me what I am. Here, surely, if anywhere, we are as clay in the hands of the potter. It is the greatest of delusions to suppose that we come into this world as sheets of white paper on which the age can write anything it likes, making us good or bad, noble or mean, as the age pleases. The age can stunt, promote, or pervert pre-existent capacities, but it cannot create them. The worthy Robert Owen, who saw in external circumstances the great moulders of human character, was obliged to supplement his doctrine by making the man himself one of the circumstances. It is as fatal as it is cowardly to blink facts because they are not to our taste. How many disorders, ghostly and bodily, are transmitted to us by inheritance? In our courts of law, whenever it is a question whether a crime has been committed under the influence of insanity, the best guidance the judge and jury can have is derived from the parental antecedents of the accused. If among these insanity be exhibited in any marked degree, the presumption in the prisoner's favour is enormously enhanced, because the experience of life has taught both judge and jury that insanity is frequently transmitted from parent to child. I met some years ago in a railway carriage the governor of one of our largest prisons. He was evidently an observant and reflective man, possessed of wide experience gathered in various parts of the

world, and a thorough student of the duties of his vocation. He told me that the prisoners in his charge might be divided into three distinct classes. The first class consisted of persons who ought never to have been in prison. External accident, and not internal taint, had brought them within the grasp of the law, and what had happened to them might happen to most of us. They were essentially men of sound moral stamina, though wearing the prison garb. Then came the largest class, formed of individuals possessing no strong bias, moral or immoral, plastic to the touch of circumstances which would mould them into either good or evil members of society. Thirdly came a class—happily not a large one—whom no kindness could conciliate and no discipline tame. They were sent into this world labelled 'incurable,' wickedness being stamped, as it were, upon their organisations. It was an unpleasant truth, but as a truth it ought to be faced. For such criminals the prison over which he ruled was certainly not the proper place. If confined at all, their prison should be on the desert island where the deadly contagium of their example could not taint the moral air. But the sea itself he was disposed to regard as a cheap and appropriate substitute for the island. It seemed to him evident that the State would benefit if prisoners of the first class were liberated; prisoners of the second class educated; and prisoners of the third class put compendiously under water. It is not, however, from the observation of individuals that the argument against 'free will,' as commonly understood, derives its principal force. It is, as already hinted, indefinitely strengthened when extended to the race. Most of you have been forced to listen to the outcries and denunciations which rang discordant through the land for some years after the publication of Mr. Darwin's 'Origin of Species.' Well, the world—even the clerical world—has for the most part settled down in the belief that Mr. Darwin's book simply reflects the truth of nature; that we who are now 'foremost in the files of time' have to come to the front through almost endless stages of promotion from lower to higher forms of life. If to any one of us were given the privilege of looking back through the eons across which life has crept towards its present outcome, his vision would ultimately reach a point when the progenitors of this assembly could not be called human. From that humble society, through the interaction of its members and the storing up of their best qualities, a better one emerged; from this again a better still, until at length, by the integration of infinitesimals through ages of amelioration, we came to be what we are to-day. We of this generation had no conscious share in the production of this grand and beneficent result. Any and every generation which preceded us had just a little share. The favoured organisms whose garnered excellence constitutes our present store owed their advantage, first, to what we in our ignorance are obliged to call 'accidental variation;' and, secondly, to a law of heredity in the passing of which our suffrages were not collected. With characteristic felicity and precision Mr. Matthew Arnold lifts this question into the free air of poetry, but not out of the atmosphere of truth, when he ascribes the process of amelioration to 'a power not ourselves which makes for righteousness.' If, then, our organisms, with all their tendencies and capacities, are given to us without our being consulted, and if, while capable of acting within certain limits in accordance with our wishes, we are not masters of the circumstances in which motives and wishes originate, if, finally, our motives and wishes determine our actions, in what sense can these actions be said to be the result of free will? Here again, we are confronted with the question of moral responsibility which it is desirable to meet in its rudest form and in the most uncompromising way. 'If,' says the robber, the ravisher, or the murderer, 'I act because I must act, what right have you to hold me responsible for my deeds?' The reply is, 'The right of society to protect itself against aggressive and injurious forces, whether they be bound or free, forces of nature or forces of man.' 'Then,' retorts the criminal, 'you punish me for what I cannot help.' 'Granted,' says society, 'but had you known that the treadmill or the gallows was certainly in store for you, you might have helped. Let us reason the matter fully and frankly out. We entertain no malice or hatred against you, but simply with a view to our own safety and purification we are determined that you and such as you shall not enjoy liberty of evil action in our midst. You, who have behaved as a wild beast, we claim the right to cage or kill as we should a wild beast. The public safety is a matter of more importance than the very limited chance of your moral renovation, while the knowledge that you have been

hanged by the neck may furnish to others about to do as you have done the precise motive which will hold them back. If your act be such as to invoke a minor penalty, then not only others, but yourself, may profit by the punishment which we inflict. On the homely principle that 'a burnt child dreads the fire,' it will make you think twice before venturing on a repetition of your crime. Observe, finally, the consistency of our conduct. You offend, because you cannot help offending, to the public detriment. We punish, because we cannot help punishing, for the public good. Practically, then, as Bishop Butler predicted, we act as the world acted when it supposed the evil deeds of its criminals to be the products of free will. 'What,' I have heard it argued, 'is the use of preaching about duty if man's predetermined position in the moral world renders him incapable of profiting by advice?' Who knows that he is incapable? The preacher's last word enters as a factor into the man's conduct; and it may be a most important factor, unlocking moral energies which might otherwise remain imprisoned and unused. If the preacher feels that words of enlightenment, courage, and admonition enter into the list of forces employed by nature for man's amelioration since she gifted man with speech, he will suffer no paralysis to fall upon his tongue. Dangle the fig-tree hopefully, and not until its barrenness has been demonstrated beyond a doubt let the sentences go forth 'Cut it down, why cumbereth it the ground?' I remember when a youth in the town of Halifax, some 33 years ago, attending a lecture given by a young man to a small but select audience. The aspect of the lecturer was earnest and practical, and his voice soon riveted attention. He spoke of duty, defining it as a debt owed, and there was a kindling vigour in his words which must have strengthened the sense of duty in the minds of those who heard him. No speculations regarding the freedom of the will could after the fact that the words of that young man did me good. His name was George Dawson. He also spoke, if you will allow me to allude to it, of a social subject much discussed at the time—the Chartist subject of 'levelling.' Suppose, he said, two men to be equal at night, and that one rises at six, while the other sleeps till nine next morning, what becomes of your levelling? And in so speaking he made himself the mouthpiece of nature, which as we have seen accedes advance, not by the reduction of all to a common level, but by the encouragement and conversion of what is best. It may be urged that, in dealing as above with my hypothetical criminal, I am assuming a state of things brought about by the influence of religions which include the dogmas of theology and the belief in free will—a state, namely, in which a moral majority control and keep in awe an immoral minority. The heart of man is deceitful above all things, and desperately wicked. Withdraw, then, our theological sanctions, including the belief in free will, and the condition of the race will be typified by the samples of individual wickedness which have been adduced. We shall all, that is, become robbers and ravishers and murderers. From much that has been written of late it would seem that this astounding inference finds home-room in many minds. Possibly, the people who hold such views might be able to illustrate them by individual instances.

" 'That fear of hell's a hangman's whip
" 'To keep the wretch in order.'

Remove the fear, and the wretch following his natural instinct may become disorderly; but I refuse to accept him as a sample of humanity. 'Let us eat and drink, for to-morrow we die' is by no means the ethical consequence of free thought. To many of you the name of George Jacob Holyoake is doubtless familiar, and you are probably aware that at no man in England has the term 'Atheist' been more frequently pelleted. There are, moreover, really few who have more completely liberated themselves from theologic notions. Among working-class politicians Mr. Holyoake is a leader. Does he exhort his followers to 'eat and drink, for to-morrow we die?' Not so. In the August number of the *XXIXth Century* you will find these words from his pen:—"The gospel of dirt is bad enough, but the gospel of mere material comfort is much worse." He contemptuously calls the Comtist championship of the working-men 'the championship of the trencher.' He would place 'the leanest liberty which brought with it the dignity and power of self-help' higher than 'any prospect of a full plate without it.' Such is the doctrine taught by this 'Atheistic' leader; and no Christian, I apprehend, need be ashamed of it. Not in the way assumed by our dogmatic teachers has the morality of human nature been propped up.

The power which has moulded us thus far has worked with stern tools upon very rigid stuff. What it has done cannot be so readily undone; and it has endowed us with moral constitutions which take pleasure in the noble, the beautiful, and the true, just as surely as it has endowed us with sentient organisms which find aloes bitter and sugar sweet. That power did not work with delusions, nor will it stay its hand when such are removed. Facts rather than dogmas have been its ministers—hunger and thirst, heat and cold, pleasure and pain, sympathy, shame, pride, love, hate, terror, awe—such were the forces the interaction and adjustment of which during the immeasurable ages of his development wove the triplex web of man's physical, intellectual, and moral nature, and such are the forces that will be effectual to the end. Some may retort that even on my own showing 'the power which makes for righteousness' has dealt in delusions; for it cannot be denied that the beliefs of religion, including the dogmas of theology and the freedom of the will, have had some effect in moulding the moral world. Granted; but I do not think that this goes to the root of the matter. Are you quite sure that those beliefs and dogmas are primary and not derived—that they are not the products, instead of being the creators, of man's moral nature? I think it is in one of the 'Latter Day Pamphlets' that Carlyle corrects a reasoner, who deduced the nobility of man from a belief in heaven, by telling him that he puts the cart before the horse, the real truth being that the belief in heaven is derived from the nobility of man. The bird's instinct to weave its nest is referred to by Emerson as typical of the force which built cathedrals, temples, and pyramids:—

" 'Knowest thou what wove yon woodbird's nest
" 'Of leaves and feathers from her breast,
" 'Or how the fish outbuilt its shell,
" 'Painting with morn each annual cell?
" 'Such and so grew these holy piles
" 'While love and terror laid the tiles;
" 'Earth proudly wears the Parthenon
" 'As the best gem upon her zone;
" 'And Morning opens with haste her lids
" 'To gaze upon the pyramids;
" 'O'er England's abbey bends the sky
" 'As on its friends with kindred eye;
" 'For out of Thought's interior sphere
" 'These wonders rose to upper air,
" 'And Nature gladly gave them place,
" 'Adopted them unto her race,
" 'And granted them an equal date
" 'With Andes and with Ararat.'

Surely many of the utterances which have been accepted as descriptions ought to be interpreted as aspirations; or as having their roots in aspiration, instead of objective knowledge. Does the song of the herald angels, 'Glory to God in the highest, and on earth peace, good will toward men,' express the exaltation and the yearning of a human soul, or does it describe an optical and acoustical fact—a visible host and an audible song? If the former, the exaltation and the yearning are man's imperishable possession—a ferment long confined to individuals, but which may by and by become the leaven of the race. If the latter, then belief in the entire transaction is wrecked by non-fulfilment. Look to the East at the present moment as a comment on the promise of peace on earth and good-will toward men. That promise is a dream dissolved by the experience of 18 centuries. But though the mechanical theory of a vocal heavenly multitude proves untenable, the immortal song and the feelings it expresses are still ours, to be incorporated, let us hope, in purer and less shadowy forms in the poetry, philosophy, and practice of the future. Thus, following the lead of physical science, we are brought from the solution of continuity into the presence of problems which as usually classified lie entirely outside the domain of physics. To these problems thoughtful and penetrative minds are now applying those methods of research which in physical science have proved their truth by their fruits. There is on all hands a growing repugnance to invoke the supernatural in accounting for the phenomena of human life, and the thoughtful minds just referred to, finding no trace of evidence in favour of any other origin, are driven to seek in the interaction of social forces the genesis and development of man's moral nature. If they succeed in their search—and I think they are

sure to succeed—social duty would be raised to a higher level of significance, and the deepening sense of social duty would, it is to be hoped, lessen, if not obliterate, the strife and heartburnings which now beset and disguise our social life. Towards this great end it behoves us one and all to work, and,

devoutly wishing its consummation, I have the honour, ladies and gentlemen, to bid you a friendly farewell."

On the motion of Mr. Chamberlain, M.P., seconded by Mr. Bunce, a cordial vote of thanks was passed to Professor Tyndall for his address.

CONTRACT BETWEEN LANDLORD AND TENANT.

The following is the report of a paper read by Professor W. A. Hunter, of University College, London, at the recent meeting of the Social Science Congress:—

In the brief space to which this paper is limited I propose to confine attention to the case of agricultural holdings, and to these in their legal rather than in their economic aspect. Both aspects are important, both must be considered in an exhaustive treatment of the subject, but the limits of time forbid an excursion into the numerous economic problems suggested by the relation of landlord and tenant. In Scotland and England (leaving Ireland for the moment out of consideration) the relation of landlord and tenant is one purely of contract. In few other countries is this the case. Almost universally on the Continent the land is cultivated by freeholders, or by customary tenants, having fixity of tenure; but in Britain, with the exception of Ulster, the land is cultivated by tenants, whose relation to the soil is determined almost entirely by the agreements made between them and their landlords. The relation which is elsewhere the rule is here the exception; in nothing are we more insular and peculiar than in the relationship which the cultivator of the soil bears to the soil. Our law confines itself to the humble task of interpreting the agreements made by landlord and tenant, and, if need be, of supplementing any deficiencies. In a dispute between landlord and tenant the rule to be applied must be sought for, in the first instance, in their agreement; if that is silent, then, and then only, the law speaks. To this perfect freedom of contract there is one, possibly not more than one, exception, which, moreover, is curious rather than important. A tenant cannot by contract deprive himself of his right to deduct the property tax from his rent (5 and 6 Vict. c. 35, sec. 73). It seems to have occurred to the Legislature that it would be somewhat of a farce to impose a tax upon landlords and allow them to throw the payment upon their tenants.

First, Rules Imposed by Law and not Alterable by Agreement.—In Ireland a great inroad has been made on the merely contractual character of the relation of landlord and tenant. The Irish Land Act makes three innovations. In the first place it declares null and void any contract "whereby the tenant is prohibited from making such improvements as may be required for the suitable occupation of his holding and its due cultivation." The reasonableness of this enactment cannot be gainsaid. The prohibition declared to be void is manifestly inconsistent with public policy. But such a provision does not go far enough. If a contract not to ask compensation for any improvements that might be effected were upheld, it is obvious that no improvements would be executed except what the tenant could wholly exhaust. The Irish Act accordingly proceeds to declare such a contract to be void, but by a subsequent section allows tenants whose holdings exceed £50 in rateable value to contract themselves out of compensation. Numerically the exception is of small importance; half a million of tenants hold less than 50 acres and only 87,000 hold more. Thus nearly 90 per cent. of the Irish tenantry are absolutely secured in respect of compensation for any improvements they make, provided these are suitable to the holding and required for the due cultivation of the land. The measure of compensation is to be determined by the judge in case of any dispute, and is not to exceed the addition made to the letting value of the land by the improvement. The Irish Act also provides for the same class of tenants an indefeasible right to compensation for arbitrary eviction. If a tenant "is disturbed in his holding by the act of the landlord, he shall be entitled to such compensation for the loss which the Court shall find to be sustained by him by reason of quitting his holding." This compensation is, however, limited according to a scale, the poorer tenants obtaining the largest amount. Thus a tenant paying not more than £10 rent may receive as much as seven years' rent by way of compensation, but a

tenant paying £100 can only get one year's rent, while in no case is the total to exceed £250. Without entering into the controversies that arise out of these enactments, one may fairly point out how much more necessary it is to Ireland than to England or Scotland that the position of the tenant should, as far as the law can make it, be satisfactory. In Ireland agriculture is beyond all comparison the most important industry. In Ireland 36 per cent. of the population live by agriculture; in Scotland 19 per cent.; while in England the proportion is much smaller, only 7 per cent.; England thus provides many alternatives to agriculture, but in Ireland there is practically no other course than submission to whatever terms the landlords choose to impose, or starvation or emigration. The Irish are sometimes twitted with their exclusive attachment to agriculture, but it would appear to be very much in the interest of England, which finds room for so small a number of her inhabitants in the cultivation of the soil, that Ireland should be a great reservoir of grain and cattle for the sustenance of her teeming manufacturing population. The chief difference between England and Ireland is that while England can get on with very imperfect land laws, a bad system of law is wholly fatal to the prosperity and progress of Ireland.

Second, Rules imposed by law, unless altered by contract.—The provisions of the Irish Land Act, which have just been enumerated, create those presumptions of law that cannot be contradicted (*presumptiones juris et de jure*): we now come to the disputable presumptions (*presumptiones juris*), that is to say, those rules of law that are applied only in the absence of any express agreement to the contrary. At first sight such rules do not seem to be of great importance. If the law speaks only when the parties are silent, there does not seem much reason why they should complain of the law. Thus, when the law allows, as it does in England, perfect freedom of bequest, a man need not quarrel with the rules of intestate succession, because by making a will he can dispose of his property in any manner he pleases. In the same way a farmer ought not to complain of the law, because he ought to put right in his lease whatever he takes objection to. This may be true, but nevertheless the view taken by the law has a great influence. The rules of law possess a certain authority; they are, so to speak, the model lease recommended by the State. It is besides a great advantage in a negotiation to know that unless you make a concession the law will favour your interests. Moreover, the rules of law are decisive when ambiguity or doubt overhangs the agreement, and in many a critical case are sufficient to incline the balance. In determining what rules ought to apply in the absence of any special agreement, the Legislature is bound in the first place to consider the interests of agriculture. The interest of the nation at large is the greatest production of food of which the soil is capable. The rules of law, moreover, should be just and fair as between man and man, holding the scales evenly, without favour. They should be consistent at once with public policy and with private justice. To what extent then, we may now ask, do the existing rules of law applicable to landlord and tenant deserve that character? I. Compensation for unexhausted improvements. A tenant obtaining a lease of his farm undertakes to restore it at the end of his lease in as good a state as it was in when he entered. If in consideration of a lower rent he agrees to make specific improvements, then of course he must give up the farm with the improvements; but in the absence of such an agreement there is no obligation, either moral or legal, to give back into the possession of the landlord a better farm than he received. If, however, a tenant, under no obligation to improve, does spend his money and energy adding to the productive power of the farm, surely he is entitled, both on grounds of public policy and by the plain dictates of justice, to recover from his landlord the difference in value between what he received and what he gives back, in so far as that difference is due to his exertions. Unfortunately the common

law of England, which was extended with the English conquest to Ireland, and, I may add, the law of Scotland, have not recognised this plain rule of natural justice. "Following a principle as old as the civil law," says Mr. Butt, Q.C., in his book on the Irish Land Act, "the common law held that if the tenant had chosen, without any special bargain with his landlord, to make improvements, however valuable, upon the land in which he had only a temporary interest—this could not excuse him from the obligation of surrendering the land. He must give up the land without any compensation for the additional value he had added to it. He was not even at liberty, having once effected the improvement, to undo what he had done, to restore the land to its original condition." Our law, in fact, has dealt with a tenant making improvements as if he were a *male fide* possessor or trespasser on the very land which it is his business to cultivate and improve. Mr. Butt's statement, however, it is worthy of remark, although accurate enough as regards our law, is in every point curiously the reverse of the truth as to the Civil or Roman Law. The blunder into which he falls has been so often made, and by so many learned writers, that it may almost be said to be classical. Yet it seems strange that any one who ever understood the spirit of Roman equity could possibly ascribe to the jurisprudence of Rome the ignorant and barbarous rule which for so many centuries has put it in the power of landlords to confiscate the fruits of their tenants' industry. The maxim of our law, that whatever is incorporated with or fixed in the soil is the property of the landlord, is derived from the Roman Law, but in Rome the maxim was used only to determine the technical question of ownership, leaving the question of compensation to be settled by a different and equitable rule. In other words, the Roman landlord recovered what was really his own, but not what in equity belonged to his tenant, without paying for it. Thus we are told in one passage (D. 19, 2, 55, 1) that if a tenant of land has built, planted or improved the land, not being bound by his lease to do so, he can sue the owner upon the lease and recover what he has spent. In another passage the case is put of a tenant who, without being bound to plant vines, did so, and increased the letting value of his farm to the extent of £10 a year, and the question was put—Could he set off his enhanced value to a demand for rent? The answer of the Roman juriconsult is that he could. (D. 19, 2, 61 p.) In Ireland, as has been stated, the rule of the Roman law is adopted and made compulsory for more than half a million tenants; in Scotland, the old rule remains unchanged; in England the Agricultural Holdings Act introduces some alteration. The English Act, unlike the Irish Act, is permissive; it applies only in the absence of any agreement to the contrary. In addition to this, a farmer is unable to make any of the more permanent improvements unless he has first obtained the consent of his landlord in writing. Without such consent he cannot erect or enlarge a building, drain a field, make a fence, improve a road, plant hops, or reclaim a yard of waste land. On the contrary, by the Irish Act, the tenant has perfect freedom to exercise his judgment, and will obtain compensation if he can satisfy an impartial judge that the improvement is suitable to the holding and required for the due cultivation of the land. The English Act, again, is open to criticism in respect of the measure of compensation. Instead of simply laying down the general principle of compensation with sufficient precision to enable a jury or arbitrator to fix the amount, the English Act divides all improvements into three classes and fixes in each case the compensation to be given. Thus if a tenant builds a house costing £100 and enjoys it for 19 years the maximum compensation which he can receive is £10, and out of this sum a deduction is to be made of the amount that may be necessary to put the building in thorough repair and good condition. In point of fact, the building may be worth fully £80, and a landlord may thus for a payment of £10 get an addition to the rent of the farm of £5 or £6 a year. If the English Act had been compulsory, the desire it exhibits to furnish a precise rule for measuring compensation would have been more intelligible; but as the Act leaves it open to landlord and tenant to make any terms they think fit, there was no necessity to introduce a hard and fast measure of compensation. No such measure can be just and equitable, for the circumstances vary so greatly that each case must be judged by itself. So obnoxious are the clauses in the English Act relating to compensation that the distinguished practi-

farmer, the late Mr. Hope, of Borlands, declared that "tenants may regard it as a matter of thankfulness that the Act is only permissive," not compulsory. His opinion will probably be shared by most Scotch farmers, who will not reckon among the shortcomings of the present Government their neglect to extend the English Agricultural Act to Scotland. II. The Game Laws.—The English law, in the absence of a stipulation to the contrary, gives the right of killing game and all wild animals to the tenants; the Scotch law applies an opposite rule and gives the game to the landlord. But according to both systems landlord and tenant are free to make any bargain they please; and, as a matter of fact, it is doubtful whether in this instance the legal presumption is of the slightest practical value to the tenant. The cases in England in which the right to protect his crops from the ravages of wild animals, conferred on the tenant by the law, is not taken away, are certainly not numerous. The presumption of law which in Scotland reserves the game for the landlord may be considered from two points of view, (1) as affecting the public interest by encouraging the multiplication of wild animals and so reducing the area of cultivation and diminishing the amount of agricultural produce; and (2) as being fair or unfair between landlord and tenant. Such a presumption of law might be injurious to the public interest without being unfair to the tenant-farmer. If during the course of the lease, the head of game is not increased, it may be presumed that the tenant in offering a rent has made allowance for the loss he will sustain in his crops. But, for the same reason, if the head of game should be increased, the rent ought to be reduced. To estimate the actual loss to crops from ground game is a task of great, if not insuperable difficulty. In 1873, an attempt was made in Aberdeenshire by a joint-committee of landlords and tenants to measure the damage resulting from game, and to agree upon a remedy. Circulars were sent to 6,000 farmers, but only 2,267 attempted to express in money the extent of their loss. Their returns amounted to nearly £20,000 a year. During the present session of Parliament, an Act has been passed to amend the Game Laws for Scotland. It takes effect from the 1st January, 1878. It provides that where there is no agreement to the contrary, the tenant shall recover compensation for all damage done to his crop exceeding £2; but the Act does not apply to existing leases; and in future it may be rendered wholly nugatory by a declaration in the lease that no compensation shall be given unless the damage exceeds £4 or £5 an acre. There is another deduction to be made from the benefits of the Act. What a farmer desires is that his crops should not be eaten; he does not desire to have them destroyed, and then to waste his time in litigation to get payment for the loss. The Aberdeenshire Conference of 1873 pointed out a more rational way of dealing with the question. Their proposal was to give the tenants the power of killing hares and rabbits. III. Assignability of Leases.—Freedom to transfer his interest under a lease is of vital importance to a tenant who is denied compensation for his improvements. Take the case of a farmer who during the first years of his lease launches out into heavy expenditure. If at the end of five or six years he is, by any chance, unable to continue, he forfeits all the capital he has invested in the farm. But if there is freedom of transfer he can go into the market and obtain for the remainder of his lease a sum equivalent to that which he has sunk. On this subject the presumption of Scotch and English law is again at variance. In England the tenant can assign or sublet, although remaining subject to the covenants of the lease. Practically, therefore, in the absence of any agreement to the contrary, a tenant can give his term to any one he pleases, subject to his continuing a surety for the rent and all the other covenants of the lease. In Scotland, on the other hand, the Courts act upon the theory, which may once have had some relation to fact, although it has long ceased to have any, that a landlord's motive for selecting a tenant was not vulgar and pecuniary, but was special attachment to the person chosen. Accordingly, in the absence of a stipulation for freedom, a lease in Scotland is not assignable. Again, while in England on the tenant's death his lease devolves on the executors, and may be bequeathed by the deceased to any one he pleases, in Scotland the heir-at-law takes the land, and the tenant cannot name a different person without the landlord's assent. This law occasionally affords a noble opportunity to a rapacious landlord. The heir-at-law may be a person engaged in another

occupation or unable to comply with the condition of personal residence usually contained in leases, and the landlord may thus recover the land in the middle of the term, and get all the benefit of the tenant's outlay. IV. Landlord's Remedies for recovery of Rent, &c.—In England the landlord is one of the few persons who can take the goods of their debtors and pay themselves without incurring the trouble of going to a court of law. Immediately that his rent is due and unpaid, the landlord can seize the stock and goods and growing crops to such an extent as he deems sufficient to make him safe. If the rent then remains unpaid for a certain time, he can sell the goods. The chief loss to the tenant is the probability that his property will not be sold to advantage. But in England the landlord cannot seize the goods before the rent is due or require the tenant to find security for the rent. In Scotland, by the Law of Hypothec, the landlord is made a mortgagee of the stock and crops on a farm for three months after the rent is due, and subsequently if he proceeds to sequester and register the sequestration. The result is that the landlord must be paid in full before any other creditors of the farmer touch his effects. Again, the landlord has the right to sequester the crop before the rent is due, by way of security. Having thus destroyed the credit of the tenant, and deprived him of the means of paying his rent by the sale of his crop, the landlord can, on pain of immediate ejectment, demand security for five years' rent in advance. It is not difficult to perceive the unenviable position of a tenant who, from the continued effects of heavy expenditure on the farm, of bad seasons, or disease among his cattle, is placed at the mercy of his landlord. The subject is one upon which it is the less necessary to dwell, as opinion in Scotland is now nearly unanimous for the abolition of Hypothec. When the question was laid before the House of Commons, if I remember rightly, only two Scotch members voted for the retention of the present law. I shall therefore make only one observation. Whether it be a good thing or not that landlords should have a first mortgage on the capital and crops of their tenants, at all events this should not be done by law. There is perfect freedom of contract, and if such mortgages be desirable they should be made by agreement, and subjected to the conditions on which other mortgages are sanctioned.

Third, Leases.—Although it is undoubtedly of the greatest importance, especially in the case of hypothec, that the presumptions of law should not be on the wrong side, still, as the tenant may exclude the unjust rules of law by the terms of his lease, the real centre of interest lies in the character of the leases usually adopted. If the leases are fair as between landlord and tenant, and favourable to agricultural development, it is of small consequence that the presumptions of law are injurious and unjust. If, on the other hand, the terms usually embodied in leases are harsh and oppressive to the tenant, and discouraging to agriculture, it would be a poor consolation to the farmer to know that if he had not made a lease, the law would have applied just and beneficial rules. There is much reason to fear that in this part of the world (Aberdeenshire) we have been going backward instead of forward in the matter of leases. There is preserved for us a remarkably interesting and valuable report by Dr. James Anderson, presented to the Board of Agriculture in London in 1794. Dr. Anderson wrote from full knowledge and a long experience of 40 years in Aberdeenshire; and amongst much other valuable information he gives us an account of the circumstances under which agriculture in Aberdeenshire made its great start, and which has resulted in the present advanced state of cattle-breeding and cultivation. Professor Hunter read a couple of extracts from Dr. Anderson's report, showing that the leases of 19 or 21 years to which tenants were subject when he wrote contained but few and simple restrictions, good tenants being rather coveted. And while landlords usually provided buildings, the tenant simply maintaining them at inventoried value, it was the custom for the landlord to pay the tenant the full increased value for any meliorations he might make on the buildings. He then continued: On some estates in Scotland the leases are worthy of the enlightened spirit that animated the Aberdeenshire lands towards the close of last century. I may quote as an example worthy of all honour the leases on the estate of Sir Patrick Keith Murray, Bart., of Ochertyre. They provide that compensation shall be paid upon a specified scale for unexhausted manures, and also for other improvements. They give the tenant the power by himself or another authorised person, to kill hares or

rabbits. The tenant also is authorised to devise his lease to anyone he pleases, and the landlord expressly renounces "all preferable rights as against other creditors of the tenant conferred upon him by the law of hypothec." Sir P. Murray's leases are also free from the irritancy or forfeiture clause which is so well calculated to work cruel injury to the tenant. Although, from the nature of the case, it is impossible to make any general statement regarding leases with confidence, I fear that the example of Sir Patrick Murray has few imitators in Scotland. Doubtless many leases contain provisions in regard to specific improvements—as draining, fencing, or building—but inadequate to give due encouragement to the farmer. Indeed, some landlords, with a superfluity of zeal, make an express stipulation that the tenant shall have "no legal or equitable claims against the proprietor in respect of any repairs, improvements, or meliorations made by him." A landlord who voluntarily renounces the privilege of hypothec is truly a rare phenomenon in Scotland. On the contrary, some landlords stipulate that, if the law of hypothec should be abolished during the currency of the lease, the tenant shall find security at once for all the future rents and other conditions of the lease, and, if fail to do so, the landlord shall have the option of turning him out of his farm—of course, without any compensation for improvements. Again, almost every lease contains a provision that the lease shall not be assignable, and that the tenant shall have no power to name his successor in the event of death. Generally, indeed, it may be said that if the law applies whips to the tenant, the leases lash him with scorpions. The game clauses are perhaps the worst. Not only is the tenant denied the power of protecting his crops from hares or rabbits—not to mention winged game—but he is in general required to act as a gamekeeper or spy, and denounce to his landlord the name of any person who may be trying to rid him of the vermin that devour his crops. As if this were not enough, the tenant is often forbidden to keep more than one dog—sometimes he is not allowed even one—and the leases of one nobleman in a not very distant county declare that "the tenant shall not be entitled to carry a gun on the farm except for the purpose of scaring [not destroying] crows or wood-pigeons, which gun shall not be loaded with shot, and the keepers shall be entitled to satisfy themselves on any occasion that said gun is not loaded in contravention of this stipulation." After having thus effectually tied the hands of the farmer, many leases go on to say that whatever the amount of damage done to his crops, the tenant shall have no compensation or redress. To fill up the cup of the farmer's sorrow, many leases provide that if a farmer, or even one of his family, kills a hare or rabbit, or neglects to act as spy or informer on any poacher that he finds on his land, he shall forfeit his lease and be turned out of his farm, the landlord, of course, appropriating the meliorations. Perhaps the most unjust provision of all is that which forfeits the lease, if the tenant should be convicted of any offence against the Game-laws. A tenant may be innocent and wrongfully convicted, and thus for no fault of his own, but for the wrong done to him by a judge, his property is to be forfeited. We have got rid in England of the old punishment of forfeiture for felony, and hence this singular result, that a felon in England is better off as regards this forfeiture of his property than a farmer who has the misfortune in Scotland to be convicted of snaring a rabbit. Another common evil in leases is the stringent manner in which the farmer is tied up in regard to the order of cropping. It may be well to mention, if only by way of contrast, the provision of the Holkham lease on the property of the Earl of Leicester. His lease is for 20, renewable at the end of 16 years. During the first 16 years the tenant may crop as he pleases; during the last four years, if the lease is not renewed, the land is to be farmed on the four course system. By this means almost unlimited freedom is secured for the tenants, while adequate security is taken that the farm shall not be run out at the end of the lease. While admitting the existence of liberal exceptions, one cannot resist the conclusion that the leases at present in vogue are very one-sided. They protect the landlord against the tenant by tying him hand and foot, and leaving him at the mercy of the factor but they do not give security to the tenant against the landlord. There are, doubtless, bad tenants as well as bad landlords, and while it is the object of the lease to control bad tenants, it only accomplishes half of its work if it fails equally to control bad landlords. Too often the factor in his eagerness to make a good bargain for his landlord fails to take account of the strong

motives of self-interest which every tenant has to farm well and of the expediency as well as justice, of leaving him as free from trammels as possible. To the tenant, his farm is his sole means of support; all his capital—the savings of himself or of his predecessors for years—is at stake; success in his business is his single ambition in life; failure to him is ruin. In the present day he has to compete with the vast grain growing regions of Eastern Europe and America, where the farmers pay no rents, and have an almost boundless command of rich virgin soil. More recently fresh meat has been brought from the other side of the Atlantic, and now in rearing cattle, the farmer has to confront a new and powerful rival. Under these circumstances, it is to be expected that men having thousands of pounds at their disposal, will look to farming as a career. What man of spirit and enterprise would submit to the humiliating and vexatious restrictions exacted on the very largest properties in this country? The present race of farmers will doubtless, under all disadvantages, struggle hard for existence, but where will their successors be found? Is there no danger that the landlords may kill the goose that lays the golden egg? Already the shortsighted policy of the last generation in dealing with agricultural labourers is bearing its fruit. Labour in the rural districts is fast obtaining a scarcity value. What will be the result of pursuing a similar policy in regard to the farmers? It will be found much more easy to drive them away than to bring them back. Those who go and settle down as freeholders on the wide and fruitful domains occupied by the English-speaking race, will not easily be brought back to the fetters and restrictions and humiliating dependence of a Scotch lease. It was not by the present policy that Aberdeenshire agriculture grew and flourished, and assuredly if that prosperity is to be maintained and improved, landlords will do well to go back to 1794 for the model of their leases, and learn that it is by a policy of trust in their tenants and not of distrust, that the ends which both landlords and tenants have in view can alone be accomplished.

Sergeant Cox, Deputy Judge of Middlesex Sessions, addressing himself to the question on the programme, spoke from practical experience as a landlord and tenant in England. The Agricultural Holdings Act had made ample provision for compensation for improvements in the absence of any contract. The only debatable question was whether it was desirable to interfere at all with the freedom of contract between landlord and tenant. In his admirable address on the previous day, Lord Gifford pointed out the province of jurisprudence, and the result of his argument was that jurisprudence ought not to extend to questions of contract between persons who were perfectly able from their status and intellectual powers to make contracts for themselves. That view of it he should certainly support, and should resist most strongly by argument or any other means, or any other legal means, the introduction of compulsory contract. Nothing could be more equitable than the ordinary run of cases. As a matter of fact, the tenant had always the best of it. Although the landlord retained to himself powers to compel cultivation of a particular form, and other things, he did not remember a case of these having been put into force against a tenant. These clauses were used rather as a guide to the tenant as to what he should do than to compel him in the doing of it. Except under a very long lease tenants would not introduce improvements. In nineteen out of twenty cases the landlord would introduce them, and the tenant pay interest on the outlay. But if the tenant would introduce them without the landlord's consent, it would be extremely injudicious that the landlord should be made to pay for improvements which he did not want. He happened to have an estate on Dartmoor of about 60 or 70 acres, the rent of which was £35. The house was in a bad state, and the tenant wanted it rebuilt. He said he was quite ready to build, and to spend any sum on which the tenant would pay 5 per cent. as additional rent for the house. The tenant would not have that, but proposed to build a house and to be paid for it at the end of the lease, five years after building was begun and stopped, but, had it been finished, the result would have been that he would have had to pay the sum at the end of the five years some £500 or £600. A man worth £35 a year would not bear to have a house upon a worth £35, and he would have been saddled with a house that would have diminished the value of his estate. That showed what would be the effect of allowing tenants to make improvements without the consent of the landlord. In

England the landlords were always willing to perform drainage. Nothing wrought better for the tenant than the Law of Distress, because the tenant without it would have to pay rent in advance; whereas, at present, deferred rent was equivalent to an increase of his capital. If distress were abolished, some other expedient would have to be introduced to enable the landlord to get possession of his property when the rent was not paid. Therefore he would most strongly object to alter or interfere with contract between landlord and tenant. They might restrict the landlord if they pleased in the very unjust arrangements that were now, he must admit, made with respect to game. The Game Laws of England required great alteration. In England the game belonged to the tenant unless expressly reserved by the landlord. It was so reserved, but as a matter of practice he found the proprietors let the tenants have the ground game, reserving the winged game for sporting rights.

Mr. W. S. BOTLEY, of Salisbury House, Upper Norwood, London, argued that the Legislature should be asked to step in, and give compensation for unexhausted improvements, by which he meant works that enhanced the letting value of the estates. Mr. Sergeant Cox had spoken of leases; but leases were the exception, and not the rule in England. It was a most unfortunate thing that the English Agricultural Holdings Act was made permissive, and thus became a mere sham. He thought it was derogatory to the statute book. He regarded the example of improvements referred to at Dartmoor as a mere exception. He was very glad to hear Sergeant Cox speak out so clearly on the game question, because that was the question of all questions requiring to be dealt with by the Legislature. He referred to the Earl of Leicester being the first landlord who had granted leases in Norfolk on such liberal terms as that provision was made for the payment of all unexhausted improvements. He thought the paper they had heard and the discussion of the subject would be of great service in educating the public mind up to that which was necessary before some trenchant enactment would be passed providing for the farmer getting compensation for all unexhausted improvements, and for relaxing the Game laws, because it was the duty of the country to do what they could to ameliorate the condition of the occupiers of land.

Mr. WM. TAYLER, magistrate of Surrey, and delegate from the Statistical Society of London, remarked with reference to the Game laws, that there was great diversity of opinion respecting them, and he knew circumstances relating to some counties in England which might make them alter their opinions with regard to the effect of these laws. He knew one proprietor in particular, the owner of a large estate, the kindest, the noblest, and best of sportsmen, who spent his ample means in the most liberal and charitable way, who declared that if the Game laws were abolished he would, and he was not singular in that, leave his land and leave its property behind him. He then went on to speak of the operation of the laws relating to house property, and the necessity for legislation.

Sheriff DOVE WILSON, Aberdeen, said there were two points before them—whether it was expedient to control contract between landlord and tenant; and next, the more important point—whether it was practicable to do so. In so far as Professor Hunter's argument went to show that it was expedient in some respects to control such contract, he thoroughly agreed with him. It seemed to him thoroughly expedient that the tenant should have a right to compensation for outlays on improvements, and to the game on his farm, and that he should not be subjected to unnecessary restriction in the matter of cropping. But then when he came to ask what light Professor Hunter's paper had thrown on the other point—whether it be practicable to draw such measures as would be effective—he came to the real difficulty of the question. It seemed to him that there was one alteration which was practicable, and which seemed to him essentially to be required, before they could have even freedom of contract in the matter. He alluded to the abolition of hypothec. So long as the landlord had that powerful weapon in his hand, he and the tenant did not stand upon fair terms. The landlord was entitled to stand upon conditions, having that power in his hand, which he did not think it was right to give him. Therefore, the best thing would be to put the landlord and tenant both on the same position with regard to contract, leaving the matter of contract open. So far, he saw no difficulty in doing that. But when they came to the other point—whether it was possible

to secure by law that the tenant shall be compensated for improvements, that he shall have absolute control of the game, then they were brought to the great difficulty of the question, and to that he had no answer. It was useless to make statutory declarations if they could not carry them out. Although they had innumerable Acts of Parliament, and said they were the terms of the law, that did no good, but rather did harm. The effect of that would only be to put more work into the hands of lawyers. They must make *presumptions juris et de jure*. But could they do that? He believed it was possible to do it. It had been done in Ireland, in the case of the smaller class of tenants, where the pecuniary interest was not great. It was possible to control the matter by Act of Parliament. But when they had a large pecuniary interest in some subject, and when they had two people anxious to make a bargain in particular terms, how could they control them? It was generally held out that it was the landlord that was anxious to have the land let upon its present terms; but that was not the matter at all. There was another party who was as anxious to have the land upon these terms. He would have the land upon other terms if he could get it, but he is anxious to have the land upon the terms offered because he cannot get it upon others. It was stated that only great hardship will cause a man to put himself out of a farm which he has occupied. But he had two illustrations to show that that was not the case. He knew of two cases of tenants upon a large scale, one of whom had been two 19 years upon the farm, and the other one 19 years. At the end of the lease negotiations were begun to renew them, and everything was agreed to till it came to the signing of the lease. In each case the tenant was presented with a draft lease, containing a great number of those restrictive clauses which Professor Hunter had alluded to as being of a most objectionable nature, binding the tenant down to all sorts of ways of cropping, as to the number of farm servants to be employed, the number of dogs, and so on, they were to be allowed to keep, as to the rights of game, game damages, and so forth. These tenants refused to sign the lease. They were men of honour, and men of good social position, who had no idea of signing a bargain that they did not intend honestly to carry out. The result was that both farms were given up. One of the tenants went to the Colonies to continue the business his father had learned him, the father retiring, and much the same happened in the other case. But what happened so far as the landlord was concerned? The landlord found a dozen people in the market ready to take the farms upon these conditions, and the land was let upon the exact terms the landlord wished. Now what he saw about it was this: When they found two men of capital, of intelligence, of position, willing to make a bargain upon these terms, how was the legislature to slip in between them? It was nothing but this—the landlord had an article of much value which he was willing to give to any one willing to take it for a certain pecuniary consideration, on compliance with certain conditions. How was the legislature ever to prevent that from being done? Former experience had shown them that every attempt of that kind had been a failure. In one way or another landlords had continued to draw deeds in such a way that power to make any alteration on the contracts the parties themselves choose to make was nugatory. It was there that the point had to be considered. That was the point that occurred to him, as a judge, to involve the difficulty. People would go to law with a contract to enforce. He should like to know what he was to do when a case of that kind came before him, in which two men of capital and position said that this was the contract they were to abide by. It seemed to him that in such a case the contract must be valid. Whatever might be expedient in the matter, they had the wishes of the tenant and landlord, and they must be governed by these alone.

Professor SEELDON AKOES, of London University, rose to controvert Sergeant Cox's position. What was termed the land question turned upon the fact that land stood in an entirely different position towards law from any other kind of property. He held that, where the interest of so large a number of the population was concerned with agriculturists, the State was entitled to step in and say what conditions were necessary for the well-being of that part of the people. As the population grew, the demand for and value of land for all purposes became enhanced. In Ireland, the State had already been obliged to step in and say what was necessary in the interest of the many against the claims set up by the few.

The same question must soon come up in Scotland and England, and he held that the State had a right to step in and control the sort of contract that should prevail between the landlord and tenant. The Game-laws was a subject *vis generis*, and rested upon an artificial basis. It must be open to the State to step in and say how far this national taste for sport was to be indulged as consistent with the general interest and the rights of those persons dependent upon the occupation of the soil.

Mr. C. W. RYALLS, of London, pointed out that there was dissatisfaction in the public mind on the question of landlord and tenant, and the general feeling was that the presumptions of law were rather too much in favour of the landlord and against the tenant. They heard of hardships, and were told that they were the result of covenants freely entered into; but they could not conceal the fact that the covenants were to some extent stamped and thrust down by the support of the presumption of law. It was more easy to carry out what the law presumed than what it did not presume. Sergeant Cox had said he had never known of a prosecution under a lease, but that was explained by the fact that tenants would not appear in Court against the landlords. No doubt the Game-laws in this country were oppressive. Game as an article of food was not of economical importance to the country, being a luxury. It was a serious question whether the Game-laws were of any benefit to the country, and should remain at all. They were certainly oppressive, and must be more or less prejudicial to the tenant, as the law at present is between landlord and tenant.

Mr. JOSEPH BROWN, Q.C., held that the legislature had a right to interfere in contracts between landlords and tenants, and had exercised that right already with regard to the Property-tax. In Ireland the Legislature had interfered between landlord and tenant. But, as to the expediency of the State interfering that was a question which, to his mind, presented a great deal of difficulty. He laid it down as a general proposition that the State should never interfere in regard to contracts between man and man who are competent to contract for themselves, except in cases where some overruling policy prevails, and where a man is a slave subject to another. For instance, the State interfered between mortgagee and lender, and in the case of expectant heirs, proceeding on that principle, that the borrower was a slave to the lender. Was the case of landlord and tenant a case in which the parties were not able to contract with one another, and with the strict freedom at the same time? His own impression was it was necessary to answer in the negative. Still, he thought, as a rule, from his experience, extending over forty years, that the tenant, whether of a house or of land, in nine cases out of ten, was obliged to accede to such terms as the landlord would propose. There were cases in which it might appear that the legislation ought to interfere, but the moment they came to apply such a proposition, they must feel surrounded by the greatest difficulties.

Sheriff SMITH, Elgin said he understood true freedom of contract to mean that by which men on both sides, supposing them to be solvent and responsible men, were fairly and equally pitted against each other. In regard to the contract of letting land in Scotland, it had to be considered whether both parties were on a fair competing condition. He was afraid they were not; because there was a privilege on one side which enabled one of the parties to pit against an offeror on one side a man who might be less safe, less prudent, and more speculative, and who was therefore prepared to offer for the subject so much the larger rent than the man who had means to pay and was able to pay. So long as that state of matters existed, and was fostered and protected by the law, he was afraid it would be impossible to say that there was anything like such freedom of contract as there ought to be between the parties. That was the fundamental part of the question, and unless they established it, it was in vain for the legislature, or for any other authority, to try to impose conditions. Indemnification for game damage, and everything of that nature, was just a question of rent. To put it in the strongest way in favour of the tenant, the privileged position in which the party selling holds enables him to say: "I am letting a subject plus so many advantages, therefore it is worth more rent than it is minus those advantages." So the whole thing came back to the fixing of the land rent, and the question arose whether the parties to the fixing of the rent were in a fair and equitable position. An almost unanimous

conclusion had been come to in Scotland that they were not on a fair footing, and they had asked the legislature to recognise that. When the question came up in Parliament there had been an almost unanimous vote by the Scotch members in favour of the abolition of the privilege. He dared say the Scotch members would have got their own way but for an alarm got up by the more numerous part of the legislature that it might interfere with a similar privilege in England. If, however, hypothec in Scotland was a bad thing, distress in England, could not be much better. He would not venture to say that the majority of the English members of the House of Commons would desire to maintain a bad thing in Scotland any more than in England, but if they wanted to deal with the matter rationally they would by the abolition of hypothec have an opportunity of seeing whether the effect of the procedure was good or bad, and regulating their action towards England accordingly. The practical effect of the law in Scotland was that it enabled one of the contracting parties to say to the other in letting a farm of £300 or £400 rent, that if he did not subscribe everything, he would go to the open market and get another offeror who would. In that state of things it was perfectly ridiculous to say that there was anything like freedom of contract. He thought it was specially incumbent upon this and any other associations who were going about advocating freedom of trade to say whether that was free trade in what related to the largest single industry in the United Kingdom. Ireland had got into such a position of misery that a Land Act was passed applicable to it which he believed in certain directions had very advantageous effects. But so far as it was an interference with freedom of contract, he was doubtful if it would not develop evils in another direction. What he would like to see done in the matter was that the ship should be put upon a true keel, and allowed to take her own way.

Mr. WOOD, (Singleton), thought that if the English Agricultural Holdings Act had been made compulsory it would have been very little hardship to the proprietors as a whole, and possibly if it were not made compulsory soon they might have an Act like that for Ireland, which was something like confiscation of landlords' property.

Mr. ALEXANDER LESLIE, (Aberdeen,) thought it would be a pity if the meeting were brought to a close without something being said from the point of view of the Aberdeenshire agriculturists. He did not represent them, but he had been engaged for a quarter of a century in agriculture in Aberdeenshire, and his ancestors had been so for time beyond memory. He considered land to be the most valuable asset that any State could possess. As a matter of fact, he contended that the bulk of the land in this country had been given away for considerations which were quite inadequate. The present holders held them for *reddenda*, which was sometimes at rose and sometimes a farthing, and what they yielded to the State did not amount to more than a million sterling, which was a perfectly inadequate rent on the part of the owners. Then this asset should be turned to the greatest possible advantage. He was proceeding to argue that the Government should do as is done in the Colonies, give waste lands to whoever would undertake to cultivate them, when he was reminded that he was beyond the question. He then proceeded to reply to Serjt. Cox's remark that tenants would not make improvements by instancing Aberdeenshire as a county in which the tenants had almost wholly improved the land. It had been said by Serjt. Cox that forfeiture had never been carried out; but it was quite different in Aberdeenshire, for there was a case where a tenant allowed by his lease to grow hay had been prosecuted for growing hay seed to sow on his own farm. He knew a farm where the tenant was as good a farmer as in Banffshire, and where the terms were that the system of cropping was to be on the five or seven course shift. The tenant found it convenient to farm on both the five and seven shift. His landlord brought an action, and the Sheriff referred the question to two practical men, who found there was no damage done; but the farmer, besides the annoyance, had to pay a great deal of money out of his pocket.

The CHAIRMAN reminded Mr. Leslie that his cases did not quite apply to the question, and he shortly thereafter resumed his seat.

Professor HUNTER, in replying, referred to the statistical account of Sir John Sinclair between 1789 and 1794, to show that the leases which then prevailed were in advance of those now in use. They provided, in cases where the lease was for

nineteen years, for renewals before the expiry of that period; and this practice, he understood, was now carried out on the property of the Marquis of Huntly. Referring to the legislative provision for compensation, he took the illustration given by Mr. Cox of his Dartmoor property as a case in which the principle was applicable. Under the Irish Act, Serjeant Cox would not have been liable for £600 as compensation for a building erected by his tenant, because the very first thing that would have been inquired into would be the suitability of the improvement to the possession, and the tenant would not have been paid more than the value of a house suitable for the due cultivation of the land. The general principle of freedom of contract he held to be economically sound and legally right. Before any objection is made to the principle, a real clear and strong case must be made out. He did not suppose that anybody would propose that the principle in the Irish Act not to allow a tenant to contract himself out of the right of compensation for arbitrary eviction should apply to the tenants in this country. But it did not follow that because some restrictions were inadmissible and unnecessary, other restrictions were not necessary and just, and unless they were so it would require a good deal of evidence to satisfy one that they ought to be adopted. A proposition might be made that would secure a considerable amount of unanimity—that a contract not to make any improvement at all was one which was clearly opposed to public policy. To contract that a tenant should make no improvement would be injurious, and also to a limited extent to contract that a tenant shall not ask any compensation, was to say that he should not make any improvement. Any general provision which would secure compensation in the vast majority of cases would enable the landlord to make arrangements under which improvements might be made. So far as the Game Laws were concerned, it seemed to him that it would be possible to frame a law so as to give tenant-farmers hares and rabbits without interfering with freedom of contract. In answer to the question raised by Mr. Taylor, what was wanted with regard to house property was a codification of the law. It had been said by Sheriff Wilson that attempts to interfere with contracts between landlords and tenants had hitherto been abortive. He would like to know any time that it had been made. He was not aware of any attempt to make any law compulsory which would have the effect of tying the hands of the landlords and tenants. He could only say that the practicability of legislating was attended with great difficulty. If there were any restrictions they should be confined within narrow limits, and relate to specific instances. He should say that the only instance in which the law should interfere to fix the terms between landlord and tenant was to say that the tenant shall get compensation for any improvements he might make.

The CHAIRMAN thanked Mr. Hunter for his paper, and remarked that they must all feel, after the discussion that had taken place, that it was a delicate matter to interfere with freedom of contract.

FOREIGN MEAT.—Speaking at an annual dinner of the Swindon and North Wilts Agricultural Association, Colonel Kingscote, M.P., said the farmers of England did not want protection, except protection from disease, and if they could get this they would not fear what other meat came into the country from America, or any other foreign country. At all events he felt the farmers of England were plucky enough to do their best to produce the very best meat. Having paid very great attention to the Committee which sat on the question last session, and having heard examined every one who came before it, he felt the greatest confidence in saying that something must be done, either by this or another Government, to protect the meat-producing people of this country from foreign diseases. It had been said that foot-and-mouth disease and pleuro-pneumonia were becoming indigenous to this country. He did not believe they were, and he thought the proof of the fact was found in the almost entire disappearance of the disease on being subject to restrictions when it raged here before; and he felt satisfied the farmers would submit to restrictive regulations for a time, for they were aware that, according to the evidence given before the Committee of which he had spoken, the disease could be stamped out by isolation. He assured them, in conclusion, that they need not dread the foreign meat supply if they could keep disease from their parks,

MR. JAMES CAIRD ON BRITISH AGRICULTURE.

At the meeting of the Social Science Congress held at Aberdeen, on September 25, Mr. James Caird delivered the following address :—

Trade is carried on between the inhabitants of the country and those of the town by exchange of rude for manufactured produce, either directly or by the intervention of money. The country supplies the town with the means of subsistence and the materials of manufacture. The town repays this by sending back a part of manufactured produce to the inhabitants of the country. The inhabitants of the country thus purchase from the town a greater quantity of manufactured goods with the produce of a much smaller quantity of their own labour than they must have employed had they attempted to prepare them themselves. The gains of both are mutual and reciprocal. The town, in which there can be no reproduction of substances, may be said to gain its whole wealth and subsistence from the country. It is this commerce which supplies the inhabitants of the town both with the materials of their work and the means of their subsistence. The quantity of the finished work which they sell necessarily regulates the quantity of the materials and provisions which they buy. Neither their employment nor subsistence, therefore, can augment, except in proportion to the augmentation of the demand from the country for finished work, and this demand can augment only in proportion to the extension of improvement and cultivation. Such, briefly, are the maxims of trade laid down by our illustrious countryman, Adam Smith. They may be regarded, in their application to our present position, as if the inhabitants of this country were one great town drawing from all quarters of the world its means of subsistence and the materials of manufacture, and repaying this by the skilful use of all the modes by which art and science have enabled us to manipulate and prepare from the rude substance a better article at less cost than can be got elsewhere. And in the peaceful progress of industry we enjoy one great advantage over all our neighbours, that for nearly two centuries we have been undisturbed either by dynastic or constitutional change, or by foreign invasion, with nothing to distract our attention or withdraw our labour from its most fitting employment, and thus, with every advantage given by stability of government, to elicit skill and to accumulate capital. When we read the frightful accounts of slaughter and misery and waste which accompany the cruel war now devastating the fairest portion of Europe we may indeed be thankful that our lot has been so long free from such calamities, but also ready to acknowledge that if our manufacturing skill and widely-extended trade exceed that of most other countries they have had the most favourable opportunity for their development. The questions to be considered in this department are of great importance—the causes of the general depression of trade; the social effects of Trade Unions, strikes, and lock-outs; and the results of the administration of the Scotch Poor Law compared with that of England and Ireland. On each of these subjects I trust some valuable information will be elicited. Three bad harvests in succession, with a largely-increased consumption of food since 1871, have doubtless tended to aggravate the depression of trade in this country. We have paid one hundred and sixty millions sterling more for foreign corn during the past five years and a half than in the equal preceding period. This is an increase of 40 per cent. on the money sent abroad for corn which, in so far as with good crops it might have been spent in this country, was a loss to our nearest and best customers, the home producers of food. The prospects of the coming season in this respect are not good. The price of wheat at present is 20s. a quarter higher than in the average of the last two years, and this on our annual consumption of wheat is equivalent to an addition of £23,000,000 to the cost of our next year's bread. This is partly due to the interruption of imports from the Black Sea, caused by the war in the East, partly to bad harvests, but partly also to diminished cultivation at home and abroad, arising from the increased cost of production in recent years without a corresponding rise in price. To a certain extent the rise of price is thus legitimate and necessary, though

its first effect may appear to add to the general depression of trade. For unless the foreign producers of food, as well as the farmers in our own country, receive adequate remuneration for their expenditure, cultivation and improvement will diminish, and trade and commerce must decline. I propose to ask your attention for a short time to the question of our supplies of food, and afterwards to refer shortly to what is popularly termed the Land Question. Every article of food and clothing is an annual product of the earth, yielding in a large degree in proportion to the ingenuity and industry employed on it by man. Corn, wine, animal food, wool, cotton, silk, sugar, coffee, tea; there is not a single article of food or clothing that is not, directly or indirectly, of vegetable growth. These substances, on which life and health day by day are sustained, cannot, like our mineral wealth, be naturally accumulated and stowed away in the bowels of the earth, but are every year a new production, dependent for their abundance in a certain measure to art and industry, but mainly on the sun and rain in due season. Wheat, which forms the great staple of the food of civilised man outside the tropics, occupies, of all cereals, the widest region suited to its cultivation. If the wheat region had been of small extent the increase of population would have been limited to the food resources of each country. A continued development of mining and manufacturing enterprise in these islands would have been impossible; for bread is indispensable, and we cannot produce it at a low price in sufficient quantity for the wants of our increasing population. Wheat is the common food, which possesses all the elements necessary to sustain life and strength, the most generally palatable, and, notwithstanding the vast increase in its consumption, the cheapest article of food we possess. The hard-working poor are far more dependent on it and much larger individual consumers of it than the rich. If its price, like that of most other commodities, had risen with the increasing demand, our trade advantages over other countries would have been counterbalanced, and to a large extent lost. But the wheat region has been designed, apparently, to be co-extensive with the progress of civilised man, and the more regular and extensive the demand upon it the more ready and continuous becomes the supply, even without the stimulus of an excessive price. The average price of the quarter of wheat for 20 years preceding Free Trade was 59s. 8d., and that of the last twenty years 51s. 4d., being a fall of 11 per cent. For the corresponding periods barley shows a rise of 11 per cent., and oats 9 per cent.; and yet, notwithstanding the fall of price, the supply of foreign wheat has risen enormously, and continues to increase. Previous to 1850 the foreign imports of wheat had not exceeded an annual average of 4,500,000 qrs. During the last five years they have reached an annual average of 12,400,000 qrs. This is a fact of great importance when we consider the increasing population of the country, and the limited means we possess within it of increasing our supply of food. Not only do the consumers increase, but as their circumstances improve they individually use more food. The common estimate of economists 30 years ago, that each person in the community consumed annually eight bushels of wheat, was a delusion. It was questioned by me in 1850, my estimates then showing that it could no much exceed five bushels. Mr. Lawes, to whose elaborate and judicious experiments the agriculturists of this country are so deeply indebted, carefully investigated this subject a few years ago, and showed conclusively that, at the time of which I spoke, my figures were the more correct. But he has also found that in a period of 16 years before 1868 the average rate of consumption increased, each person having during the first eight years used 311lbs. of wheat, and during the last eight 335lbs., or in the first period five bushels and a tenth annually, and in the last five bushels and three-tenths. In the first of those periods, 1853 to 1860, 232lbs. of this was home-grown wheat, and 79lbs. foreign. These proportions have during the last five years undergone a great change and some increase. The home-grown wheat annually consumed by each person is now 158lbs., and the foreign 131lbs. But three of these five years have yielded indifferent crops; otherwise the supply of home and foreign would have been

nearly equal. These figures show two very important results for the consideration of those who are concerned with the provision of the country. First, that the individual consumption of bread has increased; and, second, that we at present depend wholly on foreign countries for that increase, and for all further addition required by the annual increase of the population. For that addition an annual increase of wheat equal to all the wheat at present grown in Scotland would barely suffice. The natural tendency of the gradually-falling price of wheat in this country since 1848, and the rise in that of barley, oats, and animal food, has been to diminish the breadth of our own wheat. It is now one-fifth less than it was 20 years ago. And the force of that tendency, in spite of the great increase of gold, shows the steadiness of its operation. There has been a yearly increase of consumers, with a large individual power of consumption of bread, and at the same time an increase in the volume of gold—the representative of its value—and yet the price has declined. But though we are already in so great a measure supplied with our bread by the foreigner, we run no greater risk of pressure than other countries on that account, probably less than most. For instead of being dependent on the sometimes fickle climate of our own land, we make all lands our tributaries, exchanging with them the manufactured produce of our mines and looms for the crude produce of their agriculture, on terms mutually advantageous. Either in the East or West there are every year abundant harvests, and we profit by them. Since 1873 the United States and Canada have given us half our supply of foreign wheat. In 1873, with a bad harvest, their export fell one-half; but it made little difference to us, as the abundance of France and Russia filled up the vacuum at no greater cost. In 1871, France, which in 1866 had given us nearly one-third of all we required, could spare us nothing; but the plenty of Russia and the United States made good the difference. During the last two years India has been sending us considerable quantities, which in the present year have mounted up to more than a tenth of our whole supply. The famine in Southern India may for a time interfere with this; but otherwise there is every reason to believe that the numerous cultivators of her fertile plains, having found a satisfactory market, even during a year of low prices here, will continue in still larger measure a trade so auspiciously begun. The foreign corn trade of this country involves the movement of 6,000,000 tons, worth more than £50,000,000 sterling, of immense value to all those countries which find ours the best and most constant market for their produce, but most enriching us into whose lap this wealth of natural abundance is poured. And even if from war some of the main sources of our supply should for a time be cut off, we have the means within our own boundaries of at once meeting such a contingency. We grow at present nearly 1,000,000 acres less wheat than we did 20 years ago. We have only to revert to the acreage of 1856 to meet such a deficiency as would be caused by all Europe being shut against us. And, beyond that, we possess in our immense breadth of pasture land a never-failing resource of stored-up agricultural power which could be at once applied to the production of corn, if from any circumstance that course became at the same time necessary and profitable. Next to wheat, in value and quantity, are our imports of Indian corn, nearly three-fourths of which come from the United States and Canada. Last year there was a sudden increase upon all preceding imports of this substance from America, the supply jumping from 600,000 to more than 1,300,000 tons. Vast though this quantity appears, it is less than a twentieth part of the American crop. Previous to the potato famine of 1846-7 Indian corn may be said to have been quite unknown in this country. In 1847, 500,000 tons of it were introduced into Ireland to feed the people, but it was not found palatable, and the imports quickly diminished, till in 1857 they barely exceeded 125,000 tons. It was not much more in 1857, but doubled in 1858-9, after the bad harvest in this country of 1857. It rose still further in 1875, after the bad harvest of that year; and in 1876, with another deficient harvest here, it doubled at once the highest previous importation. It is the cheapest article of food in the market, being at present little more than half the price of wheat per pound, and its introduction in such large quantity greatly modifies the pressure which would otherwise be felt after deficient harvests in this country. It is next to wheat in the extent of zone of production, and therefore capable of great increase should circumstances require it. The potato crop is becoming more and more precarious. It is costly to grow, ex-

pensive in seed and manure, exhaustive of the land, and very liable to disease, and now possibly to the attacks of the Colorado beetle. The extent planted has declined nearly one-fifth since 1871, while the imports of foreign potatoes in the same time have risen from 43,000 to 300,000 tons. Germany is the great potato-growing country, whence we can always draw by a moderate increase of price whatever quantity we require. The annual crop in that country is twice as great both in quantity and per head of population, as that of either France or the United Kingdom, but it is not exported till the price rises above the rate which it yields when made into spirits. In these, the three main necessities of life—wheat, Indian corn, and potatoes—the field of growth and supply is so extensive that it has hitherto been found capable of meeting all the demands of a great increase of population without a permanent rise of price. It is very different with meat and other kinds of animal food, the increased consumption of which has led to a great rise of price. During the last 25 years there has been no great increase in the home supply of meat or dairy produce, but the quality of both has much improved. The larger demand for it has been in great part met by foreign supplies. These have within that time increased fourfold in quantity, and 50 per cent. in value, and last year reached the large sum of £35,000,000 sterling. The most portable articles were the first to be moved. Bacon has increased from 3,700 to 160,000 tons. This is a ten times greater increase than any other kind of meat, and represents many thousand acres of Indian corn, packed in the smallest possible bulk. While the import of bacon and hams has increased more than fortyfold, beef, cattle, and sheep have in the same time increased fourfold; butter and cheese sixfold. Nearly one-half of this increase has taken place since 1870. The proportions in which we are supplied at present are with meat three-fourths from home and one-fourth from abroad; and with dairy produce two-thirds from home, inclusive of milk, and one-third from abroad. Ten years ago the flocks and herds of this country were as numerous as at present. Their increase by improvement of quality tells little in so short a time on the total produce. During that interval the population has increased by 2,800,000, and the whole of their animal food, in addition to previous supplies from abroad, must, therefore, have been furnished by the foreigner. In ten years more there will be another 3,500,000 to be provided for, if no check occurs, so that the question of still larger supplies of animal food is a pressing one. Our own colonies are able to supply three times all we need, and, if the means of transport can be satisfactorily established, their capacity of increased production seems likely to outlast our wants and theirs for many generations. America, North and South, has almost boundless sources of supply, which will be developed in proportion to the remunerative character of the demand. The success which has attended the importation of fresh American meat, in ice-cooled chambers, warrants the hope of its continuance and expansion from all regions whither it can be cheaply obtained. And if it can be done successfully from the other side of the Atlantic there would seem no great difficulty in bringing slaughtered meat from the other side of the Channel. The trade is becoming one of such value and importance both to producer and consumer, as also to the intermediate agents engaged in its purchase, and sale, and transport, that all the aids of science, ingenuity, and enterprise will be enlisted in its successful extension. As the price of the best beef in New York is seldom less than 7d. a pound that quality cannot, at present, be sold wholesale in this country at a profit much under 8d. The fears of our farmers of any serious reduction of price from this cause may, therefore, be dismissed; but so wide is the area from which it may be obtained that any excessive rise of price is likely to be counteracted by a rapid increase of supply. In considering the question of the home supply of food I naturally revert to that portion of the able address of my friend, Mr. Shaw Lefevre, who presided over this department last year, in which he discussed the question of the subdivision of landed property, as exhibited by its results in this country and France. In his main propositions I entirely agree—namely, in case of intestacy, the expediency of an equal partition of land, as of personal property; restriction of settlement of lives in being; enlargement of powers of sale to those subject to settlements; simplification of titles, and easy means of registration, by which the transfer of land would be facilitated. But it is very doubtful how far these changes would lead to an increase of small proprietors, as he desires,

or diminish that aggregation of land in few hands which he so much deprecates. Each of these alterations in the law would encourage the transfer of land, but to whom would it be transferred? To those who could best afford to pay for it, and who have therefore the amplest means of fully developing its resources. If, by equal partition on intestacy some property should become divided into relatively small portions the temptation of high price is so great, and the immediate return from land-owning so small compared with other investments, that members of a family, brought up in equal enjoyment of the whole, would be induced by a high price to part with their several shares rather than submit to loss of position and income. If restriction of settlement and enlargement of powers of sale led to more land being brought into the market a cheaper system of registration and transfer would increase a competition for it in which the richest would always possess the greatest advantage. For land in this country has now become an article of luxury which rich men only can long afford to hold. The savings of capital in England are computed at £150,000,000 annually, for which there may be said to be three main investments—first, British land and houses, and other securities; second, Indian and Colonial securities; third, foreign loans. To those who desire safety and social position, and who can dispense with a large immediate return, nothing is so attractive as British land, and, if this country continues to hold its pre-eminence in trade and commerce no investment for those who can afford to wait is likely in the end to prove more remunerative. But the immediate return is smaller than from any other mode in which capital can be profitably employed. It is no matter of surprise, therefore, that the number of small and generally poor proprietors should diminish, and that many should convert their capital as landowners into tenants' capital, by becoming the occupiers of five times more land than they could hold as owners. A class of peasant proprietors in this country would soon become impossible under the temptation of the high prices at which wealthy men are anxious to obtain land. But it does not follow that, though land in this country may be above the reach of a class of peasant proprietors, it should be absorbed by neighbouring magnates. These are not the class who are keen competitors for its possession. It is the successful business men, enterprising and active, who have made their fortunes in the various professions, or in the manufacturing or mining industry of the country, in trade or commerce, or in India and the colonies, who take the place of those who, from some reason, are no longer capable of holding the land with advantage to themselves and others. These wealthy, enterprising men carry that spirit into the business of landowning, and in districts where that is languid inspire their neighbours with a similar desire for land improvement. The evil that exists in the present land system is, not that we have great proprietors among us—for, as a rule, their estates are the most liberally managed—but it is because of the too-common existence of the possession of land by persons so heavily encumbered by settlements and debt that they are incapable of doing justice either to their property or themselves. For the sake of progress in the fuller development of our agricultural resources it is desirable that the land in such case should pass into other hands. And the advantage of enlisting a large body of competitors for it, when exposed for sale, induces the offering of estates, whenever practicable, in single farms, and this tends in some degree, to its subdivision. I readily admit that property in land is one element in the stability of our social system, but it seems to be overlooked, in considering this point, that the tenant occupiers of land are entitled to be reckoned as part owners of agricultural property. The French system of land tenure is by a small number of great landowners, and a large number of small owners who are also cultivators. Between them they comprise 5,550,000 persons employed in the management and cultivation of the soil. In this number the cultivators of the land as well as the owners are included. For the purpose of comparison the same class in this country should be taken, and as for France, all the smallest landowners are embraced in these numbers; so here we ought to take all who own one acre and upwards, excluding those below one acre as householders only. I shall not, however, so strain the question, but will take the owners of 10 acres and upwards as the class we should in this country regard as the true owners of agricultural land. To these I add our cultivators, a very important and influential class of

capitalists, the tenant farmers, who, in the crops, live stock, enrichments, and implements and machinery, own equal to one-fifth of the whole capital value of the land. Part of the farmer's capital is incorporated with the soil, and it is all as indispensable for the production of crops as the land itself. Like the "plant" of a railway, no profit or produce can arise until the inert soil is set in motion by it. And in reckoning the capital value of the land, and the numbers interested in it, we should include the owners of both. There are 180,000 landowners of ten acres and upwards, and 1,160,000 tenant farmers in the United Kingdom, making 1,340,000 altogether engaged in the ownership and cultivation of the soil, and all interested in the maintenance of the present social system. Our farmers are a better educated, more intelligent, and more enterprising class, and they possess and employ individually as cultivators a larger capital than the peasant proprietors in France in their double capacity as owners and cultivators. When the two are united and reckoned as heads of families they comprise one-fifth of the total male adult population, very many of whom, with their families, though directly interested in land, follow other and more lucrative occupations. The disparity in point of numbers as compared with France is thus by no means so great as is commonly supposed. In point of efficiency in the great economical result of converting the soil to profitable use how stands the comparison? The average produce of an acre of wheat here is equal to that of two acres in France. With five times the extent of land in wheat, they produce little more than twice the quantity. With nearly double the extent of territory, they have no more live stock. On these points only is it possible for me here to institute a comparison; but on this essential question, the production of bread and meat, the superiority of our system is beyond dispute. Too much stress seems, indeed, to be laid on the relative importance of land compared with other property in this country. The value of house property is fully greater than that of all the land in the kingdom, and the annual income from it is 50 per cent. more. Funded property, railways, mines, gains from professions and trades—all of these are, even more than land, elements of stability, for all of them would be more endangered in times of civil commotion, invasion, or revolution. The income from land is little more than a seventh part of the total assessable income of the country. In the past ten years it has increased in a much smaller proportion than that of any other kind of property. And if a large number of our population were by any chance enabled to exchange their present employment, in order to become peasant proprietors, neither their capital nor their industry would be so productive. We concentrate the well-applied labour of one-seventh of our people, directed by skill and economised by capital, on the full development of our agriculture, leaving free for other industries the power, intelligence, and capital of six-sevenths. These, by our mines and manufactures, our trade and commerce, have vastly augmented the national wealth, and at a rate infinitely greater than if a large portion of their labour had been unskilfully dissipated in agricultural employment. If, like the French, five-sixths of our population were dependent on the land, each one providing from his small estate little more than his family consumed, we should, like them, long before this have been devising schemes for limiting our numbers within our means of feeding them. For that limitation is the natural consequence of the French system. The population does not increase. A distinguished French economist, M. de Lavergne, last year drew the attention of his countrymen to the risk they are thus bringing upon themselves. Quoting Rousseau, he says: "There is not a worse famine for a State than that of men. In 25 Departements of France the deaths exceeded the births." He laments the public apathy on the subject, "the French people appearing to accept their fate in the reduction of the population in the same manner as in the augmentation of the Budget, two facts which are probably not so foreign to each other as they seem." But no other result is possible, for population increases, when unchecked, in geometrical progression, and therefore in far greater proportion than a limited area of soil can support. The 5,000,000 of peasant proprietors, with $\frac{7}{8}$ acres each, and with a compulsory law of equal division among the families on the death of the owner, with no other industry, must keep their numbers within the means of subsistence which their land affords. They are frugal, "with a parsimony amounting to service," as a late observer describes them; keen for their fancied interests, and therefore supporters of personal government,

because, above all, tenacious of fixity and permanence, while the world around them is changing and advancing. And the result is that, instead of that social stability for which they looked, no country in Europe has been the theatre of so many changes. Our system, on the contrary, draws from the land of our own country such produce as it can most profitably afford, under the best economical plans we can devise. Our increasing population finds other and ready employment either at home or in the colonies, or on the great continent of the West which we have done so much to people. These in due time send us their superfluity of produce in exchange for our manufactures. We are thus no longer confined to the narrow limits of our own soil; but with the profits of our varied industries we command what we require from whatever country it can be most cheaply obtained. The beneficent principle of free trade, which it is to be feared an electoral body of peasant proprietors would have been slow to sanction, thus knits together in friendly bonds the different interests of distant nations, and will yet, I trust, enable the question of the poet to be answered:—

"When shall all men's good
Be each man's rule, and universal peace
Lie like a shaft of light across the sea?"

BREWERS, MERCHANTS, AND HOP PLANTERS.

On the subject of the dispute about the Tare on Hops a correspondent of *The Brewers' Guardian* says: "It was a great mistake to raise the Tare question again so soon. The planters made a great concession last year in fixing the allowance for the cloth in which hops are wrapped at 5 lbs., limiting also the weight of the cloth to 8 lbs. This the merchants accepted; at least they agreed tacitly to the arrangement, and they bought their hops throughout the last season upon the term of a 5 lb. tare. The resolutions that have been recently promulgated by the merchants upon the subject were not wisely nor judiciously framed, but were in the highest degree calculated to rile the planters and to put the merchants and their cause in a wrong position. It was not the policy of good tacticians to inform the planters that they, the merchants, could rule the hop trade and they could practically check business unless their demands for full tare were complied with. There was a savour of braggadocio about this resolution which amused those planters who are men of the world, but mightily irritated and alarmed the great majority who take things *au sérieux* who are inclined to believe those who boast that they can 'call spirits from the vasty deep.' They have never been so moved to unite for resistance before, and the chances of the question being settled so far as they are concerned are more remote than ever. Many of them are gravely discussing the possibility of forming a merchants' company to sell hops direct to the brewers without profit, charging merely establishment expenses, and a small interest upon the capital embarked in the undertaking. The assumption of the merchants that they can do as they please with the hop trade has fairly taken possession of them, and made them ready to help heart and soul in any scheme to throw the hop trade open. Does it not occur to the brewers that if the merchants are so united and can combine, as they declare, to check the purchase of hops, that they also have equal powers with regard to their sale—in short, that they can practically fix prices and take what profits they please? If they have the power, as they allege, in the one case, they must obviously have it in the other, and it may at any time happen that the planters do not get actual market value for their produce, while brewers may have to pay more than actual market values for the same article. We do not believe that the merchants yet have the enormous powers they claim. Their claiming to have them is bad enough, and should lead planters, and brewers especially, to be most careful not to permit the hop trade to fall into the hands of a ring who may work quite independently of all proper principles of supply and demand. The brewers want to buy their hops as cheaply as they can, in a market perfectly open and free from any speculative action; and it is becoming a grave question, since this declaration of the merchants, whether they do buy them now at market values, *plus* legitimate charges for accommodation. Profits made by merchants are so much money directly out of the brewers' pockets. So long as

these are moderate brewers will probably not object to pay them as a small extra charge for their hops; but when they exceed moderation, as may be the case at any time, if the merchants are the oligarchs they claim to be, the brewers must for their protection buy directly of the planters, many of whom now give accommodation to the merchants, and would no doubt be ready to accommodate the brewers. We trust that matters will settle down quietly again, with the tare question amicably adjusted, and the trade carried on as it has been so long by merchants, who will refute the assumption of the extraordinary powers which has frightened the planters into concerted action, and has caused some of the brewers to wonder if they are going to the cheapest market for their hops."

CANADIAN IMMIGRATION AND COLONISATION.

—A very large amount of interesting information, says *The Toronto Globe*, August 21, is given in the report of the Select Standing Committee on Immigration and Colonisation lately issued. It appears that while for the year 1876 there was a considerable decline in the immigration to Canada as compared with that of previous years, that decline was proportionately not so great as what took place in the States. In 1873 the immigration to the States was as high as 459,840, and by 1876 had dwindled down to 169,986. In 1874, as compared with the preceding year, the decline in the States was 31.84 per cent., while in Canada it was only 21.33. In 1875 the decline on 1874 was 27.07 in the States, while in Canada it had risen 30.20. Last year again, while the decline in Canada was only 6.38 per cent., that in the States was 26.65. It is to be noted that during the same period the total emigration from Britain had declined fully as much. In 1874 that decline was 22.40 per cent. In 1875—29.93, and in 1876—20.47. The immigrants to Canada in 1876 were chiefly agricultural labourers and female domestic servants, and these seem as a rule to have done well. Special efforts have also been made to induce tenant farmers with some means to settle in the Dominion, and these seem likely to be every year more and more successful. Mennonites who have settled in Manitoba are, from the evidence of Mr. J. G. Shantz, satisfied with their condition and prospects. About 6,700 in all are now in the Prairie Province, and many others are anxious to leave Southern Russia and join their co-religionists in our Northwest. The number of Mennonites who came to Manitoba in 1876 was 1,357. The same favourable accounts can scarcely be given of the Icelandic settlers who have come to form a colony in Keewatin. The loss of life among them through smallpox has been very great, and naturally there has been for this and other reasons some discouragement among them. The number of repatriated French Canadians who have taken up land in Manitoba during 1876 is 361, and they are reported as doing well and being satisfied. The opinion of the committee is that the immigration expenditure has not been excessive for the service rendered. The expense *per capita* has been indeed greatly increased from the smaller number of immigrants, while the permanent expenses of the establishments in Canada and Britain remains very much the same. But even as it is, if the extraordinary outlay incurred by the Mennonite and the Icelandic immigration, which was quite exceptional, and the expense of the buildings at Dufferin was deducted, the cost per head in 1876 would only be 6 dols. 48 cents, while in 1873, when there was a very large emigration, it was as high as 6 dols. 7 cents. The evidence given in connection with Manitoba shows conclusively the unsurpassed richness of the soil in those regions and the very large crops of cereals and roots raised. The only drawback is the grasshoppers, and the general feeling among those whose experience entitles them to speak with authority is that there is now likely to be a lengthened period of immunity from that scourge. Besides, it is found that by due exertions, even when the grasshoppers make their appearance, a great deal can be done in somewhat peopled districts to diminish, if not altogether to counteract, their ravages. It is calculated that even already wheat can be brought from Winnipeg to Toronto for 35 cents per bushel, and of course this figure will be considerably reduced when the railway is completed from Winnipeg to Thunder Bay. With an unlimited supply of rich wheat-growing land, it is needless to say how formidable a wheat-producing country those north-west regions will become in no distant day. In 1876 about 4,000 people settled in Manitoba. During the current year that number will be more than doubled.

O V A R I O T O M Y.

There are certain painful operations which it is necessary to perform on our domesticated animals to ensure safety and convenience in their management, as well as to obtain quality in their flesh as food for man. The Society for the Prevention of Cruelty to animals has wisely abstained from any attempt to interfere in this direction, although the ear-marking and docking of sheep has caused it some uneasiness. The castration of male animals used for food is such an absolute necessity that no objection to it would be tenable, if raised. The same may be said in respect to horses; although entire animals are much more frequently used on the Continent than in Great Britain. At the present day these operations are performed in a careful manner, and generally by professional men, with the least possible pain to the animals; although we read of great brutality still obtaining in half-civilised countries—India especially. Whatever may be said against ear-marking, it must be admitted that docking is requisite for the comfort and cleanliness of sheep kept under the artificial conditions of arable land. But it is gratifying to find that the infliction of unnecessary pain is fast going out of date. The caaponising of fowls, for instance, may be said to be obsolete in this country, and less common in France than it was ten years ago. The firing of horses is considered too barbarous to be adopted under ordinary circumstances, and the end to be attained is not held to be commensurate with the severity of the measure. The docking of horses is, happily, no longer in fashion. But perhaps the most significant instance which can be quoted of the humanising tendency of the age, is the dying out of the practice of spaying female domesticated animals, which was comparatively common some few years since. A more barbarous operation it would be difficult to imagine, and the advantages to be gained in these days of early maturity, can scarcely be said to cover the risk attending it. Not only so, but there is no necessity for its adoption on the ground of convenience or safety, as in the case of male animals. It is, therefore, surprising to find in *The Veterinary Journal* for June, an article by a veterinary student of the Toronto College in advocacy of this practice of spaying, or ovariectomy. The writer, Mr. W. G. Bates, states that it is extensively performed in America; and that in the State of Missouri he estimates 50 per cent. of the store sows to be spayed, and 25 per cent. of the breeding sows to be similarly operated upon after they have been used for stock purposes. In swine the operation is stated to be performed for the purpose of making them grow and fatten better, by destroying sexual desires; for weeding out those which are unfit for breeding purposes; as well as to prevent the production of more pigs than can be profitably reared. "Ovariectomy," continues the writer, "is performed on cattle for the same purposes as on swine, yet sometimes for another the perennial secretion of milk. Undoubtedly the operation is attended with very satisfactory and very profitable returns when it is confined to heifers unfit for breeding purposes; since it is succeeded by increased growth, and also by better fattening tendencies." The article goes on to show that the advantage is gained by the increased quiet of the herd, as well as that of the individual animals themselves; and that by destroying the fertility of inferior animals the quality of the general average is raised. It is pointed out that, although opinions differ as to the duration of the lactal secretion, and also as it regards the quantity and quality of the milk, yet the balance of testimony seems to be in favour of increased quality at the expense of

quantity. An instance is given of a cow which continued in milk for four years after castration, without variation of the secretion other than that due to food and temperature. The writer considers himself justified in recommending the operation in the following cases:—"In a good milker when a better quality of milk is desired—as for sickly people or the like; in an animal which has an inordinate desire for the bull, without the capacity of becoming impregnated; when disease is present; in poor-feeding cows when it is the intention to fatten them after the flow of milk has ceased; (and) in the the younger ones which are not intended for breeding purposes."

As this article is published in an English scientific journal, it must be presumed to carry with it the approval of the authorities whose names are associated with that Journal. It is in that light the *Agricultural Press* will probably view it, and on that ground it calls for comment; the more especially as the practice of ovariectomy has been advocated by at least one contemporary. Whatever may be the exigencies of cattle breeding or swine rearing in America, there can be little doubt that English breeders are wise in the discontinuance of the practice of ovariectomy. With regard to lactation, it is well known that, with careful milking, cows may be retained in profit for a time which varies according to the nature of the animals and the conditions of food and temperature under which they are placed. Milk-walks, where breeding is not practiced, are conducted on this principle; the animals being milked as long as the secretion lasts—or rather until the quantity is considered unprofitable—and highly fed during the whole time, with the view of sending them direct to the butcher. It is clear that castration would serve no useful purpose in a milk-walk, if Mr. Bates's theory is correct; for an increased tendency to fatten coupled with a decreased secretion of milk, would merely necessitate more frequent purchases—a thing to be deprecated on account of disease risks. On the other hand, a lengthened term of lactation in connection with increased quality, could only be of advantage in exceptional private families; even if such a result could be depended on. Castration, no doubt, produces a tendency to fatten, but in this country there is an increasing need for female breeding horned stock, and, although bad heifers are not quite so scarce as they might be, still they can be fed out without running the risks of ovariectomy. Animals which have arrived at mature age, and bred calves, would naturally incur greater risks from the operation; quite enough to be a complete offset to the advantages to be gained from it, as the shock to the system of an old cow must be very great. But quite independent of the risk and barbarity of the operation, the experience of the day is in favour of not keeping an animal beyond its prime, and this stage is reached by the cow in five to six years, so far as ordinary purposes are concerned; pedigree stock being, of course, quite outside this question. Added to this, is the patent fact that in this country, of all others, it does not pay to breed from bad stock; nor, in other words, to breed bad stock at all. Therefore, with improving animals, and superior management, there does not appear to be the slightest necessity for practising ovariectomy on British cattle. Worn out Alderneys and Ayrshires would certainly afford cheap material to experiment upon, and the feat of covering their dry bones with fair beef in a reasonable time would be a result to quote. But it would be of doubtful advantage to the rent-paying industry of the country. With

regard to pigs, the short time now requisite to produce the saleable and eatable small pork, which has taken the place of wastefully fat large bacon, renders spaying quite unnecessary; and the inconvenience of avoiding the slaughter of sows during the time they are in season is too trifling to be considered as a plea for the operation.

We give this publicity to the whole matter simply

because we fear the idea, being fostered, should gain ground amongst a certain class of experimentalists, who are ever ready to take up with some fresh notion; and, because we feel strongly that the practice is one of unnecessary cruelty, for which not one valid reason can be assigned, so far as the stock breeders of this country are concerned.

THE DAIRY SHOW.

The second Metropolitan Dairy Show, which was opened on Sept. 26, at the Agricultural Hall, was held under the great disadvantage of having no cows. It might have been supposed that this serious drawback to the interest of the exhibition would have been fatal to its success; but we are pleased to learn that the attendance has exceeded that of last year, while in all other departments of the show but the one lacking, this year's exhibition has been a decided improvement upon the previous one. To make up as far as possible for the important deficiency in the live stock exhibits, there was a large entry of mules and donkeys, and the greatest show of goats ever got together. The poultry show, too, was an extraordinary large and good one, there being no less than 596 entries, divided into 51 classes. The cheese department, again, was a most creditable one, as respects both quantity and quality, and the competition in the butter classes was so keen that the judges in some cases had much difficulty in making their awards.

The donkeys came first in the catalogue, and made up a large show. For stallion donkeys Mr. Charles Sutherland was first with an enormous Poitou animal thirty months old. The height of this ass is 14 hands 8 inches, and as far as size and strength go he is no doubt well suited for getting draught mules; but for hideousness it would be difficult to produce any animal standing on four legs to beat him. Ungainly in all his parts, the enormous thickness of his legs below the thin thighs amounted to an absolute deformity, and we fail to see any advantage in such an excessive accumulation of bone below without proportionate muscle above to lift the heavy weight that can hardly fail to encumber his movements. The Duke of Wellington gained the second prize with a grey donkey, less powerfully framed, but much more symmetrical, and Mr. Sutherland was third with another Poitou stallion decidedly less ugly than his fellow. In the class for female donkeys not less than thirteen hands high, there were only two entries, and the first prize fell to the Duke of Wellington for a leggy Spanish brute 14 hands 8 inches high, Mr. Sutherland being second with another of the Spanish breed. There was a great show of English donkeys, some of which were as pretty and well-formed as donkeys well can be, but mostly lacking in size. We have always heard that foreign donkeys are immensely superior to English, and so no doubt they are in size and strength; but if they were fairly represented at the Dairy Show they cannot claim to approach our home-bred asses in good looks and good proportions. There is surely a good opening for a Booth or a Bates in the donkey line, the desirable combination of size and symmetry being as yet unattained, unless in very exceptional instances.

In the mule classes Mr. Sutherland again carried off the chief honours. He showed some draught mules of great size and strength, and he claims for them that they can do harder work for longer spells, and will do it to a greater age than cart horses. It may be so; but we confess to a prejudice in favour of the noble British cart horse and against these ungainly hybrids. For carting timber in mountainous districts, where sure-footedness

and steadiness are peculiarly desirable, draught mules would no doubt be invaluable; but that they will ever come generally into use for ordinary carting and ploughing purposes we neither expect nor desire. Is it possible that, with the endurance of the ass, they do not inherit also something of the stubbornness of that patient animal? Some of the mules trotted, or rather ran, round a ring in the hall. They moved at a pretty good pace, but in an ungainly style almost painful to witness. The difficulty of steering them seemed to be great, and we should think the man would be to be pitied who had to ride one along a narrow road with a brick wall on either side. There were some mules in the Hall with so much horse and so little ass about them that if it had not been for the tell-tale ears and manes the asinine stain in their pedigrees would hardly have been distinguishable. If hybrids would only breed freely we might in time, by careful selection, hope to see produced mules almost as good as horses.

In goats, as in donkeys, there appears to be a great field for judicious development. Passing somewhat hastily through the long array of these animals, nothing struck us so forcibly as the general smallness of the animals. There were some notable exceptions; but, as with the donkeys, the biggest were generally the ugliest. In beauty there was nothing to come up to a curly-coated Persian goat, bred by the late Mr. Hector, of Bagdad, and exhibited by Mrs. Life; but there were some very nice-looking creatures of various nationalities scattered about the rows of pens. Greater size in goats is needed for both draught and milking purposes. Some of the nannies were so small that one might think a wine-glass to be large enough to use in place of a milking-pail.

In the cheese department the most striking feature was the great display of Stiltons, in the form of great pyramids containing a thousand cheeses each, exhibited by Mr. Thomas Nuttall, of Beeby, Leicester. This magnificent display gained the gold medal of the British Dairy Farmers' Association, and the silver medal awarded by the Dairy Show Committee. In the Cheese Fair, for cheese of any make, shape, or weight, shown in quantities of not less than one ton, Mr. Charles Crees gained the first prize, a silver medal and £35, and Mr. T. Waldon the second, a bronze medal and £20. For the other awards we must refer our readers to the prize list, as a detailed mention of all the honours would take up too much space, and it would be invidious to mention only a few. We must, however, express our admiration of the very tasteful display of cream cheeses of various kinds, made by Mr. Webb, of Kensington.

There were six prizes awarded to exhibitors of English butter, and, as before remarked, the competition was very keen, the general excellence being so high. When the judges had at last come to a settlement of the rival claims, the honours were awarded to the following exhibitors in the order observed:—Mr. C. F. Hollands, Mrs. Allam, Mrs. Stephens, Mr. R. Fowler, M. Jean Le Brocq, Mr. J. Osborn. We were glad to see that, in connection with the first prize that classic favourite amongst English damsels, the dairymaid, was not forgotten; and

we beg to congratulate Mr. Hollands' assistant on the receipt of the silver medal, which she so well deserves, though our satisfaction is somewhat lessened by the thought that so many other lasses, who ran her hard in praiseworthy competition, should so narrowly have missed the recognition of their skill which a palpable memento perpetuates. Of foreign butter there was a very creditable display.

To do justice to the show of poultry we should require a supplement as large as our entire paper. But as—contrary to a recent announcement by a contemporary—we are not coming out as poultry fanciers, we must leave out even the prize-list of the poultry show. No doubt it added as materially to the success of the Agricultural Hall exhibition as the presence of the excellent Coldstream Guards band did, and it has just about as much connection with a dairy show. There is plenty of room in the Agricultural Hall for both poultry and band, and we were glad to see them both there, and pleased to hear the latter only. As adjuncts to the excellent poultry show there were three varieties of hatching machines and "artificial mothers." Nothing but successful experience would warrant us in preferring any one of these to the hen, though they may all be more advantageous than that self-willed and fanciful creature. The greatest novelty in the poultry department, however, was the poultry fattening apparatus exhibited by M. Odile Martin. This is a circular structure with five stages, adapted for the accommodation of 210 birds. The fowls are fed on the cramming system, which we have hitherto regarded as one deserving the interference of the Society for the Prevention of Cruelty to Animals. But, after careful and repeated observation, we are bound to confess that the poultry, chained by their feet in small compartments, and fed by means of a tube through which food is forced down their throats by machinery, seemed to like the system rather than not. They had only recently been purchased in Leadenhall Market; yet they took to the forcing system as kindly as if they had been born to it, and when their crops were full they rested peacefully even by daylight. When twilight came on they roosted with their heads under their wings as comfortably as if they had been on their accustomed perches. M. Martin's system of artificial feeding is undoubtedly superior in all respects—especially from a humanitarian point of view—to any of the old plans of forced fattening; but whether such an elaborate machine as his, with its self-acting revolution, and raising mechanism for the feeder, is necessary, is a question which we must leave poultry fatteners to decide for themselves.

There was a good show of dairy appliances in the galleries. The official prize list, which we append, does not include the prizes awarded in this department, and we are not sure that we have before us a complete record of these awards. Bell and Co. gained a medal offered by the British Dairy Farmers' Association for Bamford's cheese-making apparatus; Hathaway for an improved cover for churns with a metallic bush; Carson and Toone for a cheese-press; Alway and Sons for railway milk-cans made to resist the wear and tear of travelling, with a cast-iron top. Bold and Vogel's milk refrigerator, and that of Lawrence and Co.; Collins's model cheese-making apparatus; Bradford's, Eastwood's, Thomas and Taylor's, and Waide's churns; and Harrison's milk-cans, earned prizes in this class.

A meeting of the British Dairy Farmers' Association was announced in some papers for three o'clock; but by some misarrangement there was no meeting till five, when only a few members were present. It was therefore decided that the meeting should be regarded as an informal one, and that another meeting should be summoned during the Smithfield Club Show week. The following is the prize list:—

DONKEYS.

Class 12.—Stallion donkeys of any variety, not less than 13 hands high, for improving English donkeys and breeding mules.—First prize C. Sutherland, second the Duke of Wellington, third C. Sutherland.

Class 13.—Female donkeys of any variety, not less than 13 hands high, in milk or in foal.—First prize the Duke of Wellington, second C. Sutherland.

Class 14.—English donkeys: Mares in milk or in foal.—First prize, R. T. Stratton.

Class 15.—English donkeys (stallions): Used by their owners in business.—First prize J. Smith, second J. Pett, third G. Hooker.

Class 16.—English donkeys (mares or geldings): Used by their owners in business.—First prize Mrs. P. Vickers, second W. Weatherall, third J. Walling.

Class 17.—Donkeys: Any other variety not included in the foregoing classes.—Second prize Rev. Canon Bridges.

MULES.

Class 18.—Mules, 15 hands high and upwards, for farming, heavy draught and tramway work.—First prize C. L. Sutherland, second C. L. Sutherland, third Rev. Canon Bridges.

Class 19.—Mules, 14 hands high and upwards, for light draught and trotting work.—First and second prize C. L. Sutherland, third Rev. Canon Bridges.

Class 20.—Under 14 hands high. First prize, C. D. Badham, third J. Cole.

Class 21.—Mules of any variety, used by their owners as a means of gaining livelihood.—Second and third prize J. Cole.

GOATS.

In milk or springing for kidding.

Class 22.—British short-haired.—First prize J. Weston, second W. Chapman.

Class 23.—British long-haired.—First prize, Countess of Egmont, second Mr. Hunt, third Mrs. Allen.

Class 24.—Foreign, pure, or crossed with British breeds.—First prize, W. Jukes, second F. A. Crisp, third D. Cowie.

Class 24A.—Kids: Any variety under eight months.—First prize Lady E. Pigot, extra first F. A. Crisp, second J. G. Ward, extra second F. Stone, third G. J. Patten.

Class 24B.—He goats (geldings).—First prize divided between W. Freeman, and R. Ribbens, second ditto, third Mrs. A. French.

Extra Class.—Special prizes offered by the Baroness Burdett Coutts, to be competed for by the members of the working classes, for she goats of any variety, irrespective of length of coat, in milk or otherwise.—First prize divided between R. Martin and C. Daymon, second ditto, third G. Tottman.

CHEESE.

For not less than two cwt., and not less than four cheeses, of the present season's make, perfect and unripened, entered by and in the name of the maker.

Class 25.—Cheshire.—First prize R. P. Walley, second G. Hosford, third C. Hilditch.

Class 26.—Cheddar and Scotch Cheddar.—First prize C. Cress, second J. Greenhill, third W. G. T. Allen.

Class 27.—Stilton.—Third prize Mrs. H. Marshall.

Class 28.—Derby, Gloucester, Wiltshire, or any other British variety, not being Cheshire, Cheddar or Stilton.—First prize Alford Cheese Factory Association, second G. Allen, third Brailsford Dairy Association.

Class 29.—American or Canadian.—First second and third prizes G. F. Jackson.

CHEESE FAIR.

Class 30.—Not less than one ton of any make, shape or weight shown in bulk—perfect and unripened—entered by and in the name of the maker, and of the present season's make.—First prize, C. Cress, second T. Walden, third T. Candy.

BUTTER.

Class 31.—Fresh. 6lbs. in half-pounds, pounds, or in one lump.—First prize C. F. Hollands, second Mrs. F. Allam, third Mrs. S. Stevens.

Class 32.—Cured. Tub, pot, or cask, of not less than 28lbs.—First prize J. Butt, second R. Colley, third G. Neale.

FOREIGN CHEESE.

Class 35.—Dutch.—First prize J. Webb, second D. McIntosh, third D. McIntosh.

Class 36.—French.—First second and third prizes L. Noel.

Class 37.—German.—First prize Count Schlieffen.

Class 38.—Italian.—First prize J. Webb, second L. Noel.

Class 41.—Swiss.—First prize J. Webb.

FOREIGN BUTTER.

Fresh, salted, or preserved. In tub, pot, tin, or cask. Any quantity—in the whole—not less than 12 lbs. or more than 1 cwt.

Class 44.—Danish.—First prize P. W. Heyman, second O. Monsted.

Class 45.—Dutch.—First prize D. McIntosh, second and third J. Webb.

Class 46.—French.—First prize L. Noel, second Vautier and Co.

Class 47.—German.—First prize H. Baum, second V. Steffenhagen, third Count Schlieffen.

PRIZES GIVEN BY THE BRITISH DAIRY FARMERS' ASSOCIATION.

The Gold Medal given by this Association and the Dairy Show's Silver Medal, were awarded to Mr. Thomas Nuttall, of Beechy, Leicester, for the excellence of the Stilton cheeses exhibited by him in four pyramids, containing 1,000 each.

Class 25.—A silver medal to R. P. Wally, a bronze medal to G. Mosford.

Class 26.—A silver medal to C. Cross, a bronze medal to J. Greenhill.

Class 28.—A silver medal to The Alford Cheese Factory Association, a bronze medal to G. Allen.

Class 29.—A silver medal to G. F. Jackson, a bronze medal to G. F. Jackson.

Bronze medals have been awarded to Messrs. Bell and Co. for Bamford's cheese-working apparatus; Messrs. Boldt and Vogel, for milk refrigerators; Mr. G. Hathaway, for improved cover for churns; Messrs. Carson and Toone, for cheese press; Mr. A. Collins, for model of portable cheese-making apparatus; Messrs. Alway and Sons, for railway milk can; Messrs. T. Bradford and Co., for Midfeather churn; Messrs. J. Eastwood and Co., for Streamlet churn; Mr. W. J. Harrison, for railway milk can; Messrs. Thomas and Taylor, for churn; Mr. W. Waide, for churn; and Messrs. Lawrence and Co., for milk refrigerator.

MR. WALTER, M.P. ON AGRICULTURAL TOPICS.

The annual dinner of the Wokingham Agricultural and Horticultural Association, of which Mr. Walter, M.P., is President, was held on October 3rd. In returning thanks for "The Members for the County,"

Mr. WALTER said he had been now 30 years in the House of Commons, and he did not remember the time when the position of a Member of Parliament was a sinecure. He would not go into the topic, which had been well thrashed out at other meetings, why the late Session had been prevented from being more fruitful in results. The late Session was like the harvest; there had been a great deal of bad weather, and it had been found very difficult to get through the very moderate bill of fare presented in the beginning. The 'only measure of any importance' that had been passed was the Prisons' Act. Many objected to that Act as trenching too much upon local self-government. He was not of that opinion. He thought the time had arrived when, with all due regard to that admirable and glorious custom of doing as much as we could for ourselves in our own localities, the management and discipline of our local prisons ought to be handed over to the State, and he, as a magistrate, was not sorry to be relieved from the duty of attending to gaol discipline. Without, however, entering upon any "burning questions," there still remained much to be effected in the sphere of domestic legislation. There was a great deal to be done in revising local taxation and setting it upon a more simple and uniform basis. He did not know how many different areas of taxation we had—there were a half-dozen at least; and it would be the business of some skilful and experienced Home Secretary—and none could be

more experienced than the gentleman who now filled the office—to devise some means of reducing our local taxation to a more simple and uniform system. There was also the most important question of sanitary legislation; and here he would like to ask whether the town in which they were then met had done all it ought to do to put itself into a proper sanitary condition. He had heard that the water drunk in the town was not pure or what it ought to be. We were going on accumulating enormous debts in carrying out sanitary arrangements. In Reading a debt of something like £200,000 had been created; and yet he did not know that every one was satisfied that they had hit on the right plan. But if we were to deal effectually with typhoid fever and other diseases which afflicted us we must persist until we should find some proper mode of disposing of our drainage, of getting rid of our sewage, and of keeping our streams and drinking-water pure. With regard to their meeting to-day, the great object was to encourage farmers to compete with each other with a view to exercising the utmost skill in the production of roots and crops, and to reward the labourers. There was one thing they had got rid of, and that was, rewarding labourers for their good conduct. Of that the men were the best judges themselves. But whether labourers thatched well, made ricks well, and other such matters were things which were open to the public eye, and were proper subjects of competition and reward. The harvest of the present year had not been very favourable, though it might be some consolation to them in that part of the country to know that they stood far better than their neighbours farther North. He had just returned from a visit to Yorkshire, and while there he had been greatly struck by the backwardness of the crops, their late ingathering, and the wet state in which they were. In the best of seasons, however, we could not find bread for more than half our population, and that seemed to establish the fact that a country like England, in which there were very large towns, could not do much more than provide food for its agricultural population. We should still require 12 or 13 million quarters of wheat, and that at £3 a quarter represented a great many millions of money. That fact seemed to point to the necessity, which applied to farmers as well as other persons, to cultivate in themselves and their neighbours those habits of thrift which Englishmen were not so much given to as other nations. A great deal might be done by the farmers encouraging thrift among their labourers. This was a matter which was attracting the attention of public men and philanthropists, as might be seen in the newspapers of the day. There seemed to him to be no subject—he would couple with it temperance—which more deserved the attention of statesmen and legislators. It was the particular point on which our countrymen compared unfavourably with the people of other countries, and especially with our nearest neighbours. Every one had been astonished at the quickness with which France had recovered from her reverses after the war with Germany. Whether we should rally so soon from a similar reverse he did not know. But, at all events, habits of thrift did not exist among us as they did among other nations. Many persons were disposed to deal with this difficulty in a summary way. By drawing more tightly the reins of Poor-law administration, by restrictions upon out-door relief, and so on, they would oblige people, by a kind of pressure, to provide for their old age. He was not one of those who would wish to enforce Poor-law administration too strictly. There were many good reasons which should make us pause before doing so. Some years ago, for example, men were paid for the number of their children, because food for powder was wanted, and thus improvident habits were fostered. But people should be encouraged and assisted to dispose properly of their earnings. A system of penny banks had been established which might be brought within the reach of every one. Then, there were the Government annuities, the Post Office Savings' Banks, and other machinery for enabling people to provide for old age, for it was not enough for a man to put by money to keep him from starvation in illness. What the poor man wanted was to know that when he got past work he should have something certain to fall back upon—that he should have some 10s. or 12s. a week absolutely safe; and there was no reason on earth why every labouring man in this country should not have it. The case of the Civil servants appeared to be a model to which we might fairly require all classes of the community to conform. The Civil servants were not left to their own discretion; it was a condition of their taking

service that they should have to contribute to a retiring allowance. It was a compulsory provision made, whether they would or not, to enable them to be independent when they came to a certain age. Why not apply that system to all classes of labourers in this country? He would be glad to see something like a compulsory deduction made from every man's wages for the purpose of providing a retiring allowance. Many banks and other establishments acted on that system. He saw no other mode of dealing with the gigantic evil of pauperism, and he would recommend its adoption to all the employers of the country.

COMMUNICABLE DISEASES.

At the first annual congress of the Sanitary Institute of Great Britain, held recently at Leamington Dr. Richardson delivered the inaugural address, of which the following is a summary:—

Dr. RICHARDSON commenced by referring to a lecture which he delivered ten years ago in Leamington, on the occasion of a Congress being held there to discuss the subject of the disposal of sewage. This lecture, he said, was based on a series of experimental researches which for some years previously he had been carrying out on the question of the mode of production and communication of those diseases which were anciently called "pestilences," but were now called "communicable" or "spreading" diseases. He did not think that a Health Congress like the present could do better than recall attention to this same subject. The suppression of plagues, he continued, is one of the grandest and supremest efforts of the sanitary reformer. The suppression can never be accomplished until all educated persons understand the advances of modern science as to the cause and mode of origin, and mode of propagation of these diseases. Whatever, therefore, tends to strike out light of knowledge on these subjects tends to elucidate, and though the spark lighted may go out again, it may help to show the way. He then proceeded to explain at length the discoveries he had made to show that the fluids secreted during various stages of some communicable diseases were capable of propagating disease, and it was proved, he said, that a definite fever could be produced in an inferior animal by the fluid secreted from a patient suffering with that fever. He classed the diseases produced by organic poisons as septicæ instead of zymotic, he preferring the word septicæ from this poison. The diseases thus named are smallpox, measles, scarlet fever, diphtheria, typhus fever, typhoid fever, erysipelas, hospital fever, puerperal fever (or the fever which occurs to women in childbed), cholera, yellow fever, ague, glanders, boil and carbuncle, infectious ophthalmia. He explained the nature of these organic poisons, the mode in which they escaped from the patient by secretions, and how these poisons might be destroyed. He then touched upon the "so-called germ theory of disease." This, he hypothesized, for it was false to designate it as a "theory," was very old indeed. He added, "There is nothing whatever in fact in the clinical history of plagues that connects them with the hypothesis of an origin from germs produced without the body and entering it to fertilize it and create a decomposition. When I say there is nothing, I mean there is nothing except the analogy of which I have spoken above, and even that breaks down, for the analogy of a fertilisation of a field by seed means always a definite process of fructification and of results from it; whereas in the history of epidemic plagues there is no such definition. The germ hypothesis fails, however, on other grounds than the clinical. If it were true that living germs possessing an independent growth and vitality enter the animal body, that every disease of a communicable kind is due to its own external living germ, and that the germs continue to multiply and increase by an independent action of their own—if this be indeed true, why do the germs after a certain time cease to multiply and allow the sick person to recover? Why do they not go on multiplying until the person is infected in every part and fatally stricken? Who would get well from a disease due to living self-propagating contagions? Again, who, if the hypothesis were true, would escape fertilisation? A general fertilising diffusion of self-propagating matter in minute invisible form entering the body as the air may enter could hardly be expected to select a small minority of a population, and if it did so at the first, why should it do so when it had seized upon many centres in which it could increase? But the history of all the communi-

cable diseases shows that each epidemic affects individuals individually at different periods in the course of the epidemic according, as a rule, to the exposure to the infected, and that the period of the disease is limited by a development and a course rendered in certain periods of time. I need hardly add in objecting to this germ hypothesis, because the fact is admitted on all sides, that not only has no one ever seen a germ disease, but that no one has ever traced any order of germination in relation to any of the communicable diseases. When a real self-propagating thing goes through its phases of life and action, like, for example, the yeast growth, we can trace it through its cause, and during its action on organic substances, can study its effects, the changes it produces, and the products of such changes. In the epidemic diseases we have no such guidance, no trace of it. These phenomena, indeed, are opposed to the idea of self-action of foreign vital material within the affected form of pestilent diseases. He then turned to a review of what he called the 'glandular theory' of the origin of contagious diseases, and of advances he had made in support of that theory during the last ten years. In that time he had seen no reason to change his views on the subject of the glandular origin of the communicable diseases. On the contrary, every new observation had tended to confirm it, and to make the demonstration of the truth more definite. In continuance of observations he had noted that the number of the distinctly communicable diseases is closely related to the number of secretions. The poison of hydrophobia is from the salivary secretions; of diphtheria from the mucous glands of the throat; of scarlet fever, he believed, from the lymphatic glandular secretion; of glanders, from the mucous secretion of the nasal surface; of typhoid from the mucous glands of the intestinal surface; and so on. In some instances the blood itself is infected, and the corpuscular matter becomes the seat of the catalytic change. A second point which had occurred to him is that the matter or particle which sets up the poisonous action, instead of being living matter, is matter actually dead, and that its effect for evil depends, in fact, upon its being dead. He meant that dead particles of organic matter in contact with living is the cause of the physical change which transforms the new particles of secretion into poisonous particles as they are brought up to the infected surface to be influenced by the infection. On the ground that the poisons were always of glandular origin, he had been led to the conclusion that under certain influences affecting glandular action the poisons may be made to originate directly through nervous impression without the necessary intervention of an infecting particle. In many epidemics it is common to see a number of examples of the prevailing disease the origin of which is traceable only to fear or anxiety. 'We call these,' the speaker said, 'nervous cases, and we try to define them as such and as distinct from cases due to contagion of a direct kind. But the symptoms are the same as those which follow actual contagion, and in epidemics of cholera they take even a fatal character. My theory explains fully the reason of this. It indicates that an extreme nervous impression acts on the glandular nervous supply, paralyzes the glandular function, and thereupon produces the same phenomena as is produced in other instances by the action of a specific poison. The theory in this manner accounts for the origin of an epidemic disease from an impression made on the nervous system without the direct contact of poisonous matter, as well as for the after-propagation of the disease by distribution of poisonous particles when that is communicated from an infected to a healthy person. It accounts equally for the production of disease and of a poisonous glandular product under conditions of starvation and cold, by which the nervous tension is reduced. Again, it accounts for the production of disease, and of a poisonous glandular secretion under special atmospheric conditions in which the activity of the atmospheric oxygen is reduced in sustaining power. . . . The study of the glandular theory of the communicable diseases has suggested to me another thought which observation of the diseases fully confirms—namely, that these diseases, like all which have their root in nervous derangement, present a distinct 'heridity.' The impression of disease made on a nervous centre is transmitted. There can be no doubt as to transmission of tendency to particular communicable diseases. Any physician in full practice can find any amount of evidence on the fact by simple natural enquiry. Typhoid fever is clearly a disease possessing hereditary transmissible quality. Diphtheria is the

measles, scarlet fever is the same and smallpox, should suspect, was once almost universally so characterised. These facts alone, one of them alone, is sufficient to stamp the original of the communicable diseases as from the animal body itself. It is certainly one of the best of proofs of the truth of the theory of the glandular origin of the poisons. It will be seen at once by those who look with sufficient patience, that the mode of connection of the diseases in hereditary line is the same as that which connects hereditary qualities of every kind, physical type, mental type, all else that binds many individualities into one family. Lastly, the study of the glandular theory of the communicable diseases enables me to offer the most rational explanation of the phenomenon of non-recurrence of the diseases after they have once attacked a person susceptible to them. It is well understood that, as a rule, a person who has been affected by a communicable disease is not affected a second time. To this rule there are many exceptions, but, on the whole, it holds good. On my theory the reason of the phenomenon is simple enough. They who are susceptible are born with a nervous impression tending to the production of a glandular secretion, easily changed into poisonous secretion under the direct action of contact with poisonous matter, or even under the influence of a central nervous depression, whereby the glandular function is deranged. But when such a person has passed through the ordeal the tendency, for a time at least, disappears, owing to the complete modification of glandular function that has been induced, to the free elimination that has been established, and probably to the change in the nervous matter itself that has resulted from organic modification. Hence the organism becomes susceptible for a time, and if the tendency be not intense that time may mean the whole of life. Indeed, as life advances, and nervous susceptibilities, derived directly from ancestry, lapse into individual self-sustained susceptibilities, these tendencies to disease subside as a general fact, and lose their activity, if not their existence."

THE SEWAGE OF COVENTRY.

The members of the Sanitary Institute paid a visit on October 6th, to the valley of the river Sherbourne, on the invitation of Lord Elibank and the directors of the Rivers Purification Association, in order that they might see the results obtained in dealing with the sewage of the city of Coventry. The visitors were met by the Mayor and Corporation of Coventry. The sewage of Coventry used to fall into the river Sherbourne, which is a swift running little stream, the point of juncture being about a mile from the city. The intercepting works of the Rivers Purification Company are here placed, and here on Saturday week Lord Elibank, Captain Twynham, Mr. J. A. Onslow, and Captain Onslow, directors of the Association, with the engineers, Mr. Henry Robinson and Mr. Mellis, and Mr. Coddington, the manager, received the visitors.

To the ordinary sewage of towns Coventry adds the refuse of its dye works, oil and varnish works, and breweries, the mass pouring down being equal to 2,000,000 gallons a day in dry weather. This sewage formerly poured into the little river and brought upon Coventry innumerable actions at law. The sewage as it comes from Coventry was shown, and a black mess it presented. They were then taken to the machine-house, where the fluid pours over a huge revolving wheel, the place of the spokes being occupied by sieves to catch and drop down the solids, which are crushed and elevated by an ingenious process, separate use being made of these as manure. The fluid is then carried on to another building, where it is in a very simple manner mixed with a cheap salt of alumina and lime. At this stage there is no inconvenience caused by the smell of the sewage, and the purified sewage is passed off into huge brick tanks, each being capable of holding 225,000 gallons. By a contrivance of locks the purified sewage, now restored to the colour of water, passes from tank to tank over brick walls, which intercept the deposit of sludge, and thence it is conveyed to where it filters through earth, thence to a lower part of the river, into which it discharges itself. The tanks are sufficient in number to allow the water to deposit all the material held in solution after the purification, and when the water is drawn off, the "sludge" remaining is laid on the earth to dry, when it is ready for manure, of the value, according to an agricultural analyst, of

21 7s. a ton. The whole party was very anxious to see the effluent water passed away, and traversed the banks of the Sherbourne in order to witness the scene of a purified river. The river still bears the marks of its long debasement. At the point where the effluent water joins the river after filtration through land the interest of the visitors concentrated. Long test tubes were filled, and the water appeared to the eye to be perfectly pure, there was no smell, and one gentleman who tasted it said that it was perfectly sweet. In point of fact, the water in appearance as seen to-day differed in no respect from the general water supply of London, and a well-known analyst has certified that it contains the small amount of 0.6 albuminoid ammonia in 1,000,000 parts. The river had no fish life in the days of its impurity, while now roach are seen. The cost of chymicals for purifying the sewage by this process is four-tenths of a penny per 1,000 gallons of manufacturing sewage, or 27 hundredths of a penny per 1,000 gallons of domestic sewage.

At the inspection on Saturday week the Mayor of Coventry expressed the satisfaction of the City Council with the works, and, at a luncheon given to the visitors, proposed the health of Lord Elibank and the directors. His Lordship, in responding, spoke of the personal interest which he and his brother directors took in the purification of rivers, and explained that the refuse of different towns required varied treatment. Dr. Richardson, in response to the toast of his health, remarked that the Rivers Purification Association did not say they had discovered the most profitable system of dealing with sewage, but merely that they had discovered a system which would enable them to do the work effectively and at a low cost. The party then returned to Coventry, and some of the members were taken by town councillors over the historic buildings of the city. Other members of the Congress left Coventry on excursions to Combe Abbey, Guy's Cliffe, Stoneleigh Abbey, and Stratford-on-Avon. The sewage farm of Lord Warwick, at Heathcote, where the sewage from Leamington is utilised, was a great object of practical interest, as showing how town and country interests can be combined to the mutual advantage of each.—*Times*.

REPORTED REMEDY FOR THE POTATO DISEASE.

About three years since Dr. Voelcker, the eminent agricultural chemist, had some peat charcoal submitted to him for analysis and report. By a new process it can be made cheaply in large quantities. This report was to the effect that its affinity for ammonia was so great, as also its general absorbent and deodorising properties, that he considered it an excellent base for an artificial manure, and one of the best agents for utilising the present wasted stores of condemned fish, and shambles refuse and night soil. Acting on these suggestions, the Company who make this charcoal, on a moor near Doncaster, prepared, by the aid of additional scientific advice, a quantity of manure. When in a fit condition for market, a sample was submitted to Dr. Voelcker, and his analysis was so favourable that a gentleman at once sent 5 tons of the manure out to Ceylon for use on his coffee plantation there, whilst many farmers in the neighbourhood took some, in quantities varying from $\frac{1}{2}$ to 10 tons, principally for application to their potato crops. The proprietors especially recommended this because they held the belief from the beginning, that the same properties which enabled this peat charcoal to render the foulest fermenting or putrid matter innocuous, instantaneously, would likewise be extended to the living plant, for the prevention for eradication of disease. The results fully confirmed this opinion. Although the potato disease was very bad last season in the large growing districts of York and Lincoln, it was universally admitted that wherever the charcoal manure had been used the tubers turned up clean and sound, and remained so throughout the winter. The reports are all highly favourable this season—up to the present; but as the crops are not yet lifted, the complete reports have not yet come in, excepting one from Surrey, where, a month ago, a portion of a field on which the charcoal was used was luxuriant, whilst another portion of it, planted with the same seed, and on the same day, but to which some ordinary farm-yard manure had been applied, presented a dreadful appearance, quite one-half of the tops having already disappeared, with no tubers under them, and the other half shockingly diseased. Still stronger evidence, if possible, comes

from *Ceylon*. During the past three or four years a scourge, called "leaf disease," has played havoc in the plantations. That belonging to the gentleman above mentioned was amongst the worst affected, but he writes that the results of the charcoal application have been of the most extraordinary character. He says that "the trees which were entirely denuded of leaf at the time of the application (May, 1876) were making fine young wood, with dark green leaves, within six weeks," although "other portions of the plantation, manured at the same time with other manures, showed no signs of growth." In subsequent letters up to this time he states that although the ravages of the disease are worse than ever this season this special portion of his plantation has continued in a clean, healthy, and vigorous condition, and is having a good crop of berries on the trees. The public accounts have told us for some time what general destruction of the coffee crop has taken place this year. So satisfied is this gentleman with the original trial, that he has lately sent 80 tons of the manure out to his plantation. Reports have lately come in from places in Lincolnshire, where the potatoes have been grown this year with this charcoal, and had lately looked luxuriant, that they were lying, during last week, some inches under water, and the farmers look upon their crops as ruined. Should the result show anything like a definite improvement in these over other crops manured differently, and which is fully anticipated, it may indeed be said that something very like a preventive of the potato disease has been discovered, and we may hope to see a great increase in the average of this crop—so valuable to us in any way, but now looked upon as very precarious. A North Lincolnshire paper, in its issue just previous to the heavy floods of the 15th inst., says: "We believe that some of this manure has been tried in the neighbourhood of Preston. We will endeavour to procure authentic evidence as to the results, and will place it before our readers."—*Preston Guardian*.

THE MEAT SUPPLY.

Mr. James E. Thorold Rogers writes as follows to *The Daily News* :—

In your article of Monday you allege certain facts in explanation of the decline of arable farming, of the scarcity of live stock in the United Kingdom, and of the growth of permanent pasture. The facts are significant, and the inferences drawn from them are serious. But you have, I think, omitted an important circumstance from your estimate of the causes which may account for the declining productiveness of the English meat supply. I mean, that it is by stock-breeding on permanent pasture that the farmer is most fully protected against the landowner. To imagine that capital will be freely and fully employed on the soil without such security as will give the farmer a reasonable prospect that he will recover his capital with an average rate of profit is to believe that the capitalist in agriculture is influenced by different motives from those which sway the capitalist, trader, or manufacturer. Under the old Corn Laws the cry of agricultural distress was perennial, for the law inflicted the worst penalties of uncertainty on the farmer, as the freetraders proved to all farmers who possessed any intelligence. But to doubt that the deficiencies of English agriculture at the present day are due to the insufficient security accorded to farmers' capital is to neglect the evidence of facts. And, of course, farmers will betake themselves to that branch of their business, if possible, in which the element of insecurity enters least. This is stock breeding on permanent pasture. If the stock be high-class the farmer enjoys an almost absolute security, for the landlord can appropriate hardly any part of such a farmer's capital. But the greatest risk is incurred by such a farmer as breeds or fattens stock on highly-cultivated arable land. Yet it is only by this kind of agriculture that the supply of meat can be largely increased at home. The extent to which it can be increased by such culture is beyond calculation. Your readers would hardly believe me if I were to narrate the facts which have come before my own experience in the case of those persons who, being freeholders, rear and fatten stock on highly-cultivated arable land.

Cubden used to say that the advantage which accrued to the country by the abolition of the Corn Laws was nothing compared with that which would come if what he called free trade land were secured. By that he meant the abolition of those restrictions on alienation which are contained in the cus-

tom of primogeniture, and the privileges of entailment, and entail, by the registration of titles, charges, and mortgages, and by the easy and cheap transfer of real estate. But it is not easy to see how a system which is dear to so many political interests, and is profitable to so many artificial interests, can be successfully assailed. The hunger of the English people during the miserable years of 1840-5, the inconvenience of a declining revenue, the evidence of paralyzed commerce and manufactures, the sacrifice of the energies, and the reasonings of the free traders, would not have converted Sir Robert Peel, or have constrained the landowners to accept a change which was of supreme benefit to them. The English Corn Laws were repealed by the Irish famine. But the assailants of the English land system would have a far more difficult task before them than the Anti-Corn Law League had, for they would have to deal with fiercer prejudices, to attack more powerful interests, to invite acquiescence in more difficult reasonings, and to appeal to far less obvious necessities. One fact will illustrate my meaning. The English farmers have been galled by a sham Landlord and Tenant Bill. They do not, it seems, resent the affront, but go on returning that party to Parliament which paralyses their industry and mocks their hopes. The English public is stinted of those supplies which nature and science could render abundant, and it suffers itself to be tossed from one party to another, from Whigs to Tories, and from Tories to Whigs, without seeing that the great landowners, from the Duke of Argyll to the Duke of Richmond, are at one in maintaining the most mischievous system of land tenure which can well be conceived. It may be added, too, that the present relations of landlord and tenant are a serious hindrance to the natural growth of rent, and that the needless cost which accompanies the transfer of land is a formidable bar to the acquisition of small freehold tenancies.

I allow that very rarely does a landlord boldly appreciate his tenant's capital when invested in the shape of agricultural improvement. I will admit even that, when such an act is committed, the public opinion of the landlords in the district is unfavourable to the spoiler. But it is done sometimes, and it may be done often. Farmers, unfortunately, will not unite for the purposes of mutual protection, and are therefore individually powerless. But they are all the more open to the feelings of suspicion and alarm. One such act may terrify a thousand persons who have not experienced, and probably never will experience, the despotism with which English law and custom endow the landowner. But I well remember, when I was for a short time a candidate for a seat in Parliament, how a retired farmer dwelt on the story of the wrongs and losses he had suffered at the hands of his landlord who turned him out of a farm which he had greatly improved, on the plea that he wanted the place for his steward, and thereby had mulcted him of several thousands of pounds. Now, if my friend had rented a farm consisting of permanent pasture I take it that his landlord could have enacted peace only instead of ponds.

"A Bedfordshire Farmer" writes :—

I read with much interest in *The Daily News* your recent article on the decline of agriculture. A few years since it might fairly be said that no class had made greater progress than the farmers of Great Britain. The readiness with which expensive machinery was adopted for the cultivation of the soil; the large consumption of linseed, cotton, and other cakes and feeding stuffs, the grinding, mixing, and preparation of fowl turned; their homesteads into manufactories for the production of meat, butter, &c., and no efforts were wanting to maintain the pre-eminence of British agriculture. To some extent this is still the case, but the ravages of cattle plague, pleuro-pneumonia, and foot-and-mouth complaint so devastated the herds of some, and frightened others, that with bad seasons, low prices for corn, and dear labour, with increased taxation, they have not been able to replace the herds and flocks which were then sacrificed. I remember a curate, with a large family, saying to me at the time above referred to, "Why do not you farmers lay down your arable land to pastures and supply us with cheaper meat?" I replied that we could produce more meat from two-thirds arable and one-third pasture than if all were laid down to grass. He was greatly surprised, but my statement is borne out by 1902

article of yesterday. With plenty of straw and a moderate proportion of hay, feeding stuffs can be imported and meat produced to any extent, providing it will pay. It has often appeared strange to me that so little importance is attached to agriculture. If farmers allude to their difficulties it is put down to their proverbial love of grumbling. If they have one bad season after another the question is—How will this affect consumers, and what will be the influence upon trade? If they complain that they have to educate the poor for the benefit of the town to which they migrate, or to contribute largely and unjustly to sanitary measures—such as a complete system of drains or sewerage—out of all proportion to the interest they have in a village in which perhaps they do not live, they are told that these are amongst the natural burdens on land. The necessity for security of tenure, in order to increase production, is admitted in principle, but denied in fact, or only made permissive. Freedom of cultivation is right for the cottager, who is allowed to grow what he likes, and to sell what he likes of the produce; but it would not be safe to entrust men of skill and capital with the same liberty, lest the land should be deteriorated. The demand that our flocks and herds shall henceforth be free from the destructive influences of foreign diseases is branded as "protection." Protectionists are not the farmers of the present day, but tradesmen and workmen who, lest their craft should be in danger, refuse to allow prisoners to lessen the cost of their maintenance, and thus decrease the rates by remunerative labour. It cannot be too strongly impressed upon the public that the importation of disease means dear meat. The time is coming when the interests of producers and consumers will be found to be identical, and in nothing more so than in the preservation of the health of our live stock. I am curious to know what the Government, with its boasted majority, will do with the report of the Cattle Plague Commission. Shall we have more "conclusive speeches," and another permissive measure?

Mr. Walter Wren writes:—

A few facts in support of your leader of last Monday, and Professor Thorold Rogers' letter in your issue of to-day, may be acceptable. I own and farm 43 acres—23 arable, 20 pasture. I take stock at Michaelmas, employing a valuer, who values the live and dead stock at the prices they would fetch. I have his valuation before me, dated 6th October. I subjoin a summary:—

215 sheep	2635	18	0
28 pigs	78	0	0
14 ditto, a few days old			
5 cows, 3 heifers, 3 cow calves	300	0	0
2 donkeys, 24, poultry, 25	13	0	0
Contents of rick-yard	219	0	0
Seeds, turnips, &c.	50	0	0
Dead stock, not including tools, hurdles, &c.	147	0	0
	£1,442	18	0

Since receiving the valuation, I have sold four-score sheep and bought two horses. In my opinion the amount is too low. He puts an out-stock at £110, which I value at £150. But let that pass. The point I want to make is that my capital is over £233 to the acre. The average of tenant-farmers' capital throughout England is probably not much more than £10 per acre. Why is this? Landlord farming is one thing, tenant-farming is another. It makes no difference to me whether I have £1,000 in my pocket, in my land, or at my banker's. It makes a great difference to a tenant-farmer. Most of the land in England is farmed by tenant-farmers; therefore we have not one-half the live stock in England we ought to have, and not a quarter produced which the land is capable of bearing. The more stock the more manure; the more manure the larger the crops. The limit of this has never been approached yet. But tenant-farmers actually prefer ten bullocks and one hundred sheep, with meat at 1s. a pound, to twenty bullocks and two hundred sheep, and meat at 6d. a pound. Why should they increase their expenses and their risks and reduce their profits when "the landlord may boldly appropriate his tenant's capital?" So they do not get the full benefit of their skill, experience, and knowledge, the land goes uncultivated, and the nation suffers. They cannot live wages which must be paid to secure justice to the

land. All over England the labourers have been defrauded of their common rights. So we have that class divorced from the soil which ought to be most closely connected with it, all necessities of life needlessly dear, and dependence on foreign countries for a large percentage of our food supply. A war would bring a revolution. We don't want a war, so we must get what we want another way. Tenant right—that is, security for capital, compensation for unexhausted improvements, and game the property of the occupier, would do great things. But England wants more than that. She wants her soil owned by the living, not by the dead or unborn. We want settlements and entail abolished. Tenants for life can't do justice to their land or their tenants. Often they can't grant leases if they would. Often they are engaged in getting all they can out of the land for their widows and daughters, and their tenants doing so too. Give us free trade in land. Do not discourage, but encourage Englishmen to own their native land. Encourage the industrious, frugal, and saving to invest their savings in land and in the improvement of it. Make the sale and buying of land as easy as of Consols. Discourage foreign loans and loanmongers. The wealth of a nation consists in the health and strength and happiness of its men, and women and children, not in bits of paper. When I sent my Return this year to Mr. Giffen I invited his attention to it, and suggested that the returns of landowners and tenants should be kept separate. When this is done the eyes of the nation will be opened. The advantages of ownership will be demonstrated, and "convertible husbandry" will supersede "permanent pasture."

HERD BOOK OF HEREFORD CATTLE.

The Committee appointed on the 3rd Oct. to make arrangements for the formation of a Society to purchase the copyright, &c., of Eyton's "Herd Book of Hereford Cattle" met a second time on Wednesday week, at Hereford. It was agreed to purchase the copyright of Mr. Duckham for £600.

It was then resolved "That the Society shall consist of life members or annual members, who shall pay an entrance fee of half a guinea. Life members shall pay on entrance five guineas, in addition to their entrance fee of half a guinea, and henceforth annually half a guinea, or such other sum as the Council may from time to time prescribe. Subscriptions to become due and payable on the 1st day of January in each year."

It was further agreed that the business of the Society shall be under the entire management of a council, president, vice-president, and twenty-four life members; that members of the Society should be entitled to receive free the volume published next after the date of their subscription; that the price of volumes to non-subscribers should be one guinea each; and that the registration fees should be 2s. 6d. for bulls and 1s. for cows.

Most of those present gave in their names as life members of the Society.

Messrs. Duckham and Badham were appointed secretaries of the Society *pro tem*, and it was resolved that they be requested to issue a circular embodying the resolutions passed, and soliciting the names of those who desired to become life members or annual members of the Society.

SACK PRESERVING.—A North German paper states that corn and other sacks may be effectually prevented from rotting, and otherwise made to do duty much longer than usual, by simply soaking them in a solution of oak-bark tan. The quantities recommended are 2lbs. of tan in 17 or 18 pints of boiling water, the clear solution being strained off after it has stood an hour. In this the sacks should lie for twenty-four hours, and then be well washed in fresh water and carefully dried.

AGRICULTURAL SOCIETIES.

DERBY.

The annual Show in connection with the Derbyshire Agricultural and Horticultural Society was opened on Tuesday, October 2.

The Notts Guardian says:—From the moment that the Show was opened till the time when it was closed in the evening a continuous stream of people poured into the cattle market, which consequently presented a very animated appearance. The faulty arrangements for the admission of the public to the market must be deprecated. Ingress could only be obtained by means of one or two very narrow gateways, through which only one person could pass at a time, and consequently when the pressure of the crowd was great—as indeed it was all day—a number of ladies and others were somewhat hustled about. Any discomfort experienced in this way, however, was compensated for by the really splendid exhibition of stock inside the grounds. The cattle and horses were very numerous, and the quality was superior in most cases to what had been witnessed at any previous Show held under the auspices of this Society. Some good heifers were sent in for competition, and Mr. T. E. Stevenson was awarded first honours for a splendid animal aged two years and seven months. For stirks under two years belonging to a tenant farmer there was only one competitor—Mr. Carrington—who of course carried off the prize offered for this class, and Mr. T. H. Oakes obtained first prize in the same class for members of the Society who owned not less than twelve cows. Very few calves were forwarded, and Mr. Oakes obtained the first place. The best Short-horned bull class, for three years old and upwards comprised some really good animals, and the judges, who had some difficulty in making their awards, ultimately decided in favour of Mr. Oakes, who was indeed extremely fortunate in obtaining prizes in various departments of the Show, having sent in for competition a number of unusually good cattle. The different classes of horses were above the average, but the interest of the non-professional portion of the visitors was centred in the jumping competition, which commenced at two o'clock within an inclosure, for which extra charge for admission was made. From the grand stand a good view of the leaping could be obtained, and it was consequently well patronised during the time the trial of the horses was in progress. The animals were first ridden over the grass to a gorse hurdle beyond which was a wide ditch, which they had to leap; and, this done, they had to surmount the in-and-out-hurdles, which was rather a ticklish manœuvre. Additional interest was attached to this portion of the proceedings from the fact that a professional lady rider participated in the somewhat hazardous contest, and the spectators were not slow to evince their approval of her abilities as a horsewoman, taking as she did most of the leaps with perfect coolness and ease. The trial, it is to be regretted, was attended with somewhat disastrous consequences. One of the horses belonging to Mr. Waite, of Duffield, became restive, and the stirrup leather giving way the animal bolted, dashing in amongst a crowd of people and spreading consternation around. Several persons were thrown violently to the ground, and two at least were severely injured. One of these was Mr. Spalton, of Mammerton, whose knee was badly hurt, and Mr. John Eley, of California, who was sorely bruised about the foot and ankle. In no department of the Show was there perhaps a better exhibition than that of pigs; the judges had great difficulty in giving their decisions,

especially as in some cases different breeds were shown under the one class.

PRIZE LIST.

CATTLE.

DAIRY COWS.

Four cows for dairy purposes.—First prize, T. H. Oakes, Riddings House; second, T. Hopkinson, Woodthorpe.

Two cows for dairy purposes.—First, second, and third prizes, E. Vale, Rose Hill.

Pure bred Shorthorn cow, having had a living cow since January 1st.—First prize, T. H. Oakes, Riddings House; second, W. T. Carrington, Croxden; third, T. Briggs, Fishwick, Lichfield.

HEIFERS.

Pair of heifers under three years old.—First prize, T. E. Stevenson, Catton's Farm, Ashby; second, Col. Ellis, Ellistown Farm, Bagworth; third, W. T. Carrington, Croxden Abbey.

Pair of in-calf heifers, belonging to a tenant farmer dairying not less than twelve cows.—First prize, E. Vale, Rose Hill; second, W. T. Carrington, Croxden Abbey; third, W. Tomlinson, Stanley.

STIRKS.

Pair of stirks under two years old, most adapted for dairy purposes belonging to a tenant farmer.—Prize, T. Carrington, Croxden Abbey.

Pair of stirks under two years old, most adapted for dairy purposes, belonging to members not dairying less than twelve cows, and bred by exhibitor.—First prize, T. H. Oakes, Riddings House; second, M. T. Hopkinson, Woodthorpe; third, W. T. Carrington, Croxden Abbey.

CALVES.

Rearing cow calves, bred by the exhibitor since January 1st, 1877.—First prize, T. H. Oakes, Riddings House; second, G. M. Dixon, Bradley Hall.

LONG HORNS.

Bull of any age.—Prize, R. Hall, Walton-on-Trent.

Pair of dairy cows, in milk.—Prize, R. Hall, Walton-on-Trent.

Pair of heifers, over two and under three years old, in calf.—Prize, R. Hall, Walton-on-Trent.

Pair of heifers two years old.—Prize, R. Hall, Walton-on-Trent.

BULLS.

Shorthorn bull, three years old and upwards.—First prize, T. H. Oakes, Riddings House; second, W. Harrison, Coken Park.

Shorthorn bull, two years old and not exceeding three.—First prize, E. Vale, Rose Hill; second, R. Briggs, Alvaston; third, E. Hall, jun., Howick House, Whaley Bridge.

Yearling (or not exceeding two years old) bull, of the pure Shorthorn breed, most suitable for breeding purposes.—First prize, W. T. Carrington, Croxden Abbey; second, W. Hollingworth, Stanton Grove; third, Mr. Mandy, Shipley Hall.

Bull calf not exceeding twelve months old.—First prize, W. T. Carrington, Croxden Abbey; second, H. Chandos-Pole Gell, Hopton Hall.

FAT STOCK.

Fat beast of any breed.—First and third, Col. Ellis, Ellistown Farm, Bagworth; second, R. Ratcliffe, Newton Farm.

Bull and three cows of any age.—First and third prizes, T. H. Oakes, Riddings House; second, T. Hopkinson, Woodthorpe.

HORSES.

SPECIAL PRIZES.

Brood mare and foal for agricultural purposes. A special prize of five pounds, given by Mr. J. Mayer, for the best foal by either of his horses for 1876. Also a special prize of five pounds, given by Mr. Tomlinson, of Southwood, for the best foal by Farmer's Glory, for 1876.—First prize, T. Orme, Hoos Loeton; second, Mr. Damelow, Tichnall; third, H. Chandos-

Pole Cell, Nopton Hall. Mr. Tomlinson's prize.—Mr. J. Hellsby, Twyford. Mr. Mayer's prize.—Mr. Chambers.

Two-year-old gelding for agricultural purposes.—First prize, R. Ratcliffe, Newton Hall; second, J. Hellsby, Twyford.

Two-year-old filly for agricultural purposes.—First prize, J. Thompson, Wilson Hall, Melbourn; second, B. Hind, Mickleover.

One-year-old gelding for agricultural purposes.—First and second prizes, S. Wade, Mickleover.

One-year-old filly for agricultural purposes.—First prize, J. Hawksworth, Barton; second, W. Flint, Snesby.

Pair of horses for agricultural purposes.—First prize, W. Barber, Congerstone; second and third, T. H. Oakes, Riddings House.

Brood mare, best fitted for breeding hunters, with foal at foot.—First prize, J. Smith, Weston-on-Trent; second, S. W. Cox, Spondon.

Hack, above four years.—First prize, R. G. Buckstone, Aske, Derby; second, J. Colishaw, Tongre, Ashby.

Gelding or filly, of the value of £50, not thorough-bred, above three and under four years of age, for hunting purposes.—Prize, E. Hill, Skettle.

JUMPING CLASS.

Juniper.—First prize, A. G. Worthington, East Lodge, Needwood; second, J. Gascoyne, Littleover; third, W. Heywood, Ilstock.

Horse or mare, not more than three years old, for hunting or riding purposes, bred within the Society's district.—First prize, S. Robson, Melbourn; second, W. Hollingsworth, Ailston.

Two-year-olds for hunting purposes.—First prize, A. O. Worthington, East Lodge, Needham; second, J. T. Martin, Derby.

Yearling colt or filly.—First prize, Mr. Newbold, Milton; second, W. Robinson, Tattenhill, Burton.

Cob, not exceeding 14½ hands.—First prize, O. E. Part, Duke-street, Derby; second, G. Holbrook, Attenborough.

Hunter, equal to 15 stone.—First prize, M. Walwyn, Osmaston; second, S. Burditt, jun., Chesterfield.

Hunter, four years old and upwards, equal to 12 stone.—First prize, W. Wright, Wollaton; second, J. Fenton, Shardlow; third, S. Robson, Melbourn.

SHEEP.

LONG-WOOLLED.

Five breeding ewes, having had lambs in 1877, and suckled them up to the 1st June.—First prize, Mr. Newbold, Milton; second, R. Johnson, Kirk Ireton; third, Mr. Newbold, Milton.

Five long-woolled theives.—First prize, R. Johnson, Kirk Ireton; second, J. Bryer, Vicar Wood; third, J. Grammer, Sawley.

Class 39.—First prize, J. Sawley; second, W. J. Sketchley, Ambaston.

Long-woolled ram, of any age above a shearling, *bona fide* the property of the exhibitor at the time of entry.—First, second, and third prizes, R. Johnson, Kirk Ireton.

Shearling long-woolled ram.—First prize, R. Johnson, Kirk Ireton; second, R. Lee, Wood Head, Kniveton; third, R. Johnson, Kirk Ireton.

Long-woolled ram lamb.—First prize, R. Johnson, Kirk Ireton; second, J. Mellor, Atlow Mill.

SHORT-WOOLLED.

Five breeding ewes, having had lambs in 1877, and suckled them up till the 1st of June.—First prize, G. German, Normanton-le-Heath; second, C. Smith, Langley; third, J. Rose, The Ash, Ktwell.

Five short-woolled theives.—First and second prizes, W. Baker, Moor Barns, Atherstone.

Five short-woolled ewe lambs.—First prize, C. Smith, Langley; second, Mr. Knight, Caudwell.

Short-woolled ram, of any age above a shearling.—First prize, W. Baker, Moor Barns, Atherstone; second, C. Smith, Langley; third, W. Baker, Moor Barns, Atherstone.

Shearling short-woolled ram.—First and second prizes, W. Baker, Moor Barns, Atherstone; third, C. Smith, Langley.

Pen of five fat wether sheep of any breed, not exceeding twenty-two months old.—Prize, G. German, Normanton-le-Heath.

Three Shropshire ram lambs.—First and second prizes, C. Smith, Langley.

PIGS.

Boar of any age, best adapted for general use.—First prize, P. Spencer, Alvaston; second, J. B. Gregory, Rowthorne, Chesterfield; third, W. Stevenson, Farnah, Duffield.

Sow of any age.—First prize, J. Spalton, Bowbridge Farm; second T. H. Oakes, Riddings House; third, J. Langley, Mickleover.

Three breeding pigs of one litter.—First prize, T. H. Oakes, Riddings House; second, W. J. Sketchley, Ambaston; third, J. Raynor, Nuns Field, Etwell.

Pig, the property of an agricultural labourer.—First prize, J. Startin, Brislingcote House, Burton; second, T. Carrington, Burton-road, Etwell.

LUDLOW.

The twenty-ninth meeting of this Society was held at Ludlow on Thursday Oct. 4, and as far as the Show itself is concerned was a decided success.

The weather was charmingly fine, and was pleasant to rove over the Castle by way of a change, and the Show was the largest and best the Society has ever held. To commence with the cattle, which anywhere in the neighbourhood of the home of the white faces always demand the first consideration, a really excellent display was made, taking in the whole of the classes at a glance. In the open competition for bulls of any breed, a sweepstakes, a splendid lot of animals was shown. Mr. Wm. Taylor's magnificent Thoughtful, square, compact, and standing firmly on his legs, and possessing all the distinctive characteristics of a true Hereford, carried off the premier prize; and the same renowned breeder also secured the first prize in the class for two-year-old bulls with Telescope, another animal of unquestionable merit, but not coming so nearly to perfection as Thoughtful. One of the best classes was that for yearlings bulls; every one of the half-dozen animals shown was a little beauty. But Mr. Carwardine's Anxiety had no difficulty in defeating his antagonists. Not yet a year old, he has never been beaten, although a competitor at a large number of Shows. He took first prize at the late Royal, and at the B. and W.E., at the Herefordshire Show, and at Leominster. He is descended from the most fashionable blood, and amongst the top prizes taken by his dam, Helena, amounting altogether to about £250, are four at the Royal and three at the Bath and West of England, besides others at Hereford and Ludlow. The second and third prizes in this class both fell to Mr. John Price, for animals which, singularly enough, were similarly placed at both the Herefordshire and the Leominster Shows. The steer and heifer classes brought out a great many first-rate animals, but there were only two among them which call for special notice. These were the pair of heifers shown by Mrs. Sarah Edwards in Class 14. They were the sole representatives of the Class, and when we mention that they were the handsome and famous Leonora and Beatrice, it will at once be seen by those who have watched the successes chronicled by these beautiful creatures that none but very extraordinary animals could have been entered against them with any prospect of success. Although in regular competition at the two chief Shows and all the leading exhibitions on this side of the kingdom neither of them has ever sustained defeat. Beatrice used to be the luckiest of the two, but this year the scales are turned, and it is Leonora who is proving the most captivating where the pair come into competition not as a pair but singly. Thus in the present case the judges bestowed upon her the honours for the best animal in the yard. Everybody fully agreed with the decision, and pronounced it the only one the judges could honestly come to. Of the remaining classes, in that for breeding cows a numerous and capital collection of animals was shown, and again in the fat cow class. In the case of the latter class, indeed, a degree of excellence rarely if ever excelled at any local exhibition was observable, and there was no lack of encomiums passed upon the merits of the massive, symmetrical creatures exhibited.

Concerning the sheep, they equally merit the broad eulogy of being a splendid lot of animals in point of character, while the exhibition was gratifying enough on the score of the number of entries. The rams, yearling and aged, were a truly grand lot, and deserved the most liberal praise; and in their turn the ram lambs were also exceedingly good. So were the breeding ewes, while of the yearling ewes it would be only necessary to repeat the criticism passed upon the rams. The wether and ewe lamb classes were largely represented, and by a class of animals which, taking them altogether, deserved no

small praise. The pen of ewe lambs which took the first prize, belonging to Mr. Richard Bach, were an extraordinarily good-looking, even lot, and there is something singular about their success. They were only entered at the pleasure of Mr. Bach's "boys," who had a fancy to see what they would do, and therefore they received no special attention in view of the trial. The "boys" were doubtless surprised at the result, more particularly as amongst the animals defeated was a pen shown by their relative, Mr. Francis Bach, of Onisbury, the famous breeder of sheep.

Pigs were a small but creditable show.

The five classes for horses attracted no fewer than sixty-four entries, and the majority of the exhibits were of a superior order. Excellence was especially noticeable in the cart mare and foal class.—*Abridged from the Hereford Journal.*

MUTFORD AND LOTHINGLAND.

The *Suffolk Chronicle* says:—The annual Show of the Mutford and Lothingland Agricultural Association was held on Thursday, Oct. 4th, at Lowestoft, and the day being really "St. Luke's summer" weather, the attendance of visitors was numerous. The Association is comparatively a young one, but it is well supported by the agriculturists of the neighbourhood, and its Show promises, in course of time, to take a fair place among local exhibitions. The stock and roots exhibited on Thursday would not in any way bear comparison with the specimens we meet with, for instance, at the Hadleigh Farmers' Club Shows; but there was a good entry in almost all the classes, and there is to be said in favour of the exhibition—that it was a fair sample of the stock of the district, the animals not being got up for the Show. Thus the agricultural horses were just as they came from hard work, and though there is very little to be said of them as show animals, they were of a good useful sort. For the prizes of £3 and £1, offered for agricultural stallions, two horses were entered—Mr. S. Ball's Suffolk Dunwich, and Mr. John Read's bay Hercules. There was no question which was the best, and the judges very quickly gave the first prize to the Suffolk. The brood mares with foals formed a good class—the best of the horse classes, in fact. The majority were bays and browns, Suffolks in this district seeming to be the exception. The other agricultural horse classes call for no remark. In the hackney, pony, and jumping classes there were some nice animals, and the judges had no difficulty in awarding the jumping prizes. Cattle were beyond the average at the Shows of this Society. The best animal in the yard was, without doubt, the well got-up white Shorthorn heifer, belonging to Mr. Hubbard, which took the first prize in her class and also the prize for the best fat ox or heifer in the Show. Mr. Mayhew's heifer was also a good one, but was nothing like so forward as Mr. Hubbard's; she has only been fatted since January, and in about three months' time will have made a very nice beast. Messrs. Reeve and Woods showed some very good red polled cows and heifers, and the steers shown by the executors of the Rev. R. A. Arnold were good ones. In the sheep classes there was but little competition, though the Show was a decided improvement on those of former years. Mr. J. L. Barber showed some good Suffolk black-faced sheep. For the pig prizes Mr. W. Everitt and Mr. W. W. Woods were the principal competitors. The judges had not much trouble in deciding any of the classes, for Mr. Everitt showed some very good black pigs—of Mr. G. M. Sexton's stock—and won all the first prizes. His pair of sows under six months were good ones, and his two-year-old boar by no means a bad one. Of barley there was a larger show than might have been expected, a baker's dozen bushels being ranged side by side, and of several—particularly the first-prize lot, Mr. W. L. Pollard's—it may be said that they were very nice barleys for the season, and all were in good condition. Red wheat was a fair show, but only two samples of white were shown. The roots, we were told, were a fair sample of the roots of the district. They were good, sound roots, but not large; it might be expected that there would be a good deal more growth in the mangels at this early period, but those exhibited were ripe. The yellow globes were best, but they were small. Swedes were as big as the mangels, and were the best of all the roots.

NORTHALLERTON.

This Show was held on Friday, Oct. 5, in a field near the Court-house, at Northallerton. With the exception of one or

two showers, which fell early in the afternoon, the weather was favourable. The attendance of visitors, however, was not as large as it has been at some previous exhibitions held by the Society. This was no doubt attributable to the fact that the harvest is now being reaped in the district, and to many of the farmers and others so engaged being unable on that account to take a holiday. In another respect the lateness of the crops operated against the success of the Show. The falling-off in the number of entries to be seen in the subjoined comparative statement could only be considered due to that cause. Many who had stock to exhibit had been afraid that more important interests would suffer at this critical season if they took their animals to the Show, and so they kept them at home. It was a good exhibition, however, the numbers being still considerable, and the quality of a high class generally. About £375 was distributed in prizes, including a cup of the value of £25, given by Mr. G. W. Elliot, the member for Northallerton, for the best hunter; another worth £25, offered by the same gentleman, for the best Shorthorn belonging to and bred in the district; and a third, of the value of £3 3s., presented by Mr. Elliot, for the best pen of poultry. The entries last year and this were as follows:—

	1876.	1877.
Horses	248	245
Cattle	66	70
Sheep	103	81
Pigs	92	38
Poultry, &c.	245	196
Farm produce	95	60
Dairy produce	50	49
Sheep dogs	9	9

As was to be expected, the chief feature of the Show was the horse department, and, what is more to the credit of the district, some of the most noticeable animals were amongst the younger ones bred therein. This was especially so in the hunter classes, in most of which the competition was very keen. Coaching horses were not numerous, nor was there any great interest taken in them. But for the recent coaching revival in London and elsewhere in the South it is more than probable that ere long comparatively few of this class would be bred. The roadsters, on the other hand, claim much attention, and nowhere more than in Yorkshire. Here there was a good show, the prize-takers being really first-class animals. More interesting to the great bulk of the spectators, however, were the animals for agricultural purposes. It must have been very gratifying to the more active promoters of the Society, who have been seeking for years past to bring about an improvement of the breed in the district to see how satisfactory has been the progress made in that direction. At the luncheon on the ground, Mr. Booth, the chairman of the committee, referred to this, expressing the pleasure he had had in hearing a small clay farmer refuse £80 for a cart-horse he had bred, and saying that he believed an improvement in the breed generally had taken place. So large was the entry, and so high the standard of excellence amongst the agricultural animals shown, that the honours, apart from the mere money prizes, were of more than ordinary value. The riding of hunters in the ring and the jumping were fine exhibitions, leading towards the close to heighten the interest of the spectators who lined the enclosure or crowded the extensive grand stand flanking it.

Next in order of merit came the Shorthorns, which formed one of the best, if not one of the most numerous, exhibitions of cattle that has taken place under the auspices of the Society. Royal Rufus, belonging to Mr. George Yeats, of Stadler, took the first prize in the class for bulls over two years, and in the younger class a very pretty roan of one year and nine months carried a similar honour to Theakstone Grange, Bedale. Mr. Hutchinson, of Catterick, the owner of many bovine favourites, had his usual fortune here, winning three firsts—one with a bull-calf, another with a cow (Lady Alicia), and the third with a heifer under three years old. The best animal in the yard, and therefore the winner of a first prize in its class, as well as of Mr. Elliot's £5 cup, was adjudged to be a heifer under twelve months belonging to Messrs. N. Russell and Co., Northallerton.

In pigs, sheep, poultry, &c., the exhibition was fully equal to what has been seen at Northallerton in previous years.

SWINDON AND NORTH WILTS.

The third annual Show of this Society was held on the 1st and 2nd Oct. There was a good show of horses and milch cows, and a fair show of sheep. The pig show was a small one. In the cart-stallion class Mr. J. Hibberd, of Stanton, Chippenham, took the first prize, while the second fell to Mr. T. P. Brown, of Burdorp. For the best two-year-old cart gelding or filly Mr. Wilson, of Shrivendham, took first and second prizes. In the class for mares and foals the competition was close; the first prize fell to Mr. Matthews, of Tockenham. Mr. Thomas Faith, of Lamborne, Hungerford, gained Mr. Hasbury's prize, value £3, for the best pen of short-wool

wethers, ten month old; second prize for the best pen of breeding ewes; and also Mr. T. P. Brown's prize, value £5, for the best pen of Hampshire Down ewe lambs. There were three classes for boars, breeding sows, and fat pigs. In the first Mr. W. Hewer and the Earl of Radnor took first and second, and Mr. J. Keovil, of Liddington, took first prize in the fat pig class. In the cheese competition there were three classes, twelve entries being for one cwt. Wiltshire-made cheddar cheese, the first prize falling to Mr. Foss, of Buscot, Mr. W. Hull taking first prize for one cwt. of Wiltshire-made double cheese, and Mr. L. Grist for one cwt. Wiltshire-made single cheese. There was also an exhibition of corn.

FARMERS' CLUBS.

CROYDON.

STABLE MANAGEMENT.

At a meeting of this Club, held on Thursday, the 11th Oct., a lecture on the above-named subject was delivered by PROFESSOR PRITCHARD of the Royal Veterinary College.

The PROFESSOR, on rising, said he had two objects in view in giving this lecture. One arose out of the fact that horses are often treated badly, both in and out of the stable, through want of knowledge or neglect on the part of their owners, and he might be the means of some information being conveyed to such owners. The other object was that a good discussion on the subject might follow his remarks. Any one acquainted with horses must be aware that to keep them in good condition and secure their best services for the longest period, attention must be paid to stable management. The first question he would ask was—Are horses better in boxes or stables? Provided they had plenty of room, he held that nothing could be better than a good loose box, in which the horse has an opportunity of moving about and thus getting beneficial exercise. Assuming boxes to be the best, he would point out a few principles to be regarded in preparing these boxes, viz., to secure good ventilation, even temperature, good drainage, and good light. A loose box should be of a good height, and at least 10 feet long by six wide; he would recommend a length of 14 feet and a width of 12 feet. The best stables at the College are 16 feet high. He did not say this was necessary, but recommended them to be as high as practical. As to material, he recommended the use of stone, if it could be obtained, with foundations of concrete, or with slate between the first few courses, if built of brick. He also recommended the lining of walls with wood inside, elm being the best. He sometimes found glazed tiles used, but these, if used in a light stable, should never be white, the glare being liable to affect the horse's vision injuriously. He was aware that "*necessitas non habet legem*," but where practical, and where room was not of excessive importance, he was opposed to having either lofts or sleeping-rooms over stables. He would have the roof ceiled on the inner surface, or, still better, would have a thatched roof, the only objection to which is that it is more liable to fire. As to the flooring, it must be of such a nature as not to absorb moisture, nor to be slippery. He had seen nothing better than ordinary bricks carefully laid edgewise, care being taken to select good bricks. These will never become slippery nor absorb any great amount of urine. Having built the stable, he now had to touch on the ventilation. There should be an ingress of fresh air and egress of the air poisoned by the breathing of the horses. This must be secured without draught, and to do this there were some very elaborate contrivances, but his own experience taught him that they were unnecessary, and that tubes might be easily arranged between the ingress openings near the ground, and the egress openings near the roof. With regard to drainage, the system usually used is one of underground drainage, the flow of the stable slanting from all sides to the grating in the centre, or movable plates are used, or similar devices. But he held that there was no necessity for this underdraining. He would simply lay a piece of iron or stone with a groove by which the largest stable might be properly drained. At the College they have drainage of all these kinds, and in those having the surface drainage their state is always far the best. With re-

gard to temperature, he did not wish to say much beyond this—that he would, if possible, keep it as near as possible to 56 or 60 degrees Fahrenheit all the year round. He then came to the subject of lighting. It was well known that ponies and horses kept in coal mines would go completely blind, and from this he argued that horses kept in dark stables would be liable to have their visionary organs injuriously affected. It might be said that dealers commonly kept their horses in a low medium of light. There might be reasons for this. A horse kept in a dark place would show a better action on being brought from his stable into the air, and he believed it was a fact that horses so kept would look better in their coats. He recommended that iron mangers should be fixed in brickwork, rather than simply boarded to keep the horse from putting his head under, for he had seen several cases where the horse had reared, put his feet in the manger, and broken it right through. He strongly objected to the unnatural practice of fixing racks above the horse's head. He recommended the use of ordinary head collars, and objected to the system sometimes advocated of tethering horses by the heel, believing they can easily be prevented from slipping their collars by the use of a properly-adjusted strap. This was the system always used by himself, though he knew many cavalry officers recommended fetterlocking. He advised that food should be given in small quantities and frequently, the horse's stomach being small in proportion to the size of the animal and in consequence of the mode of digestion in the horse's stomach he was quite certain that it was best to give the horse his water to drink before his food. An opposite course of procedure frequently leads to attacks of colic, and gives rise to pain and inconvenience. He attributed this to the gastric juice which ought to digest the food becoming diluted by the admission of water into the stomach while the food is there. He did not believe the horse preferred dirty to clean water, but that he prefers soft water to hard to such an extent that he would rather drink dirty soft water than clean hard water. He approved of putting a little warm water into that drank by the horse, rather than the practice of some grooms of putting the water in the warm stable for the night to have it a little warmer in the morning. As to the quantity of water to be given, he recommended, under ordinary circumstances, that the horse should have as much as he wants, making exceptions in cases where the horse was to be put to violent exercise in a short time. He objected to the practice of always keeping the water in front of the horse. On the subject of feeding, he recommended the best food, and regularity in feeding. Ordinary horses should be fed three times a day. A little hay should be given to the horse to amuse himself with during the cleaning out of the stable, and he should then have his water offered to him, but he would certainly not allow him to have anything like a meal before giving him the water. He would have about a peck of corn, with a small quantity of cut hay and a little bran, divided into three, or at most four feeds, for the day. He did not believe in the necessity for crushing oats, the horse, in proper condition, having splendid masticating organs. But in dealing with horses in a state of disease, or in the habit of bolting their food, he would advocate the crushing. As to bedding, nothing could be better than straw, which should be thick in those places where the animal might injure his houghs. In case of a horse having a habit of much pawing, sawdust might be used in front of him;

LANDLORDS' DUTIES AND TENANTS' DIFFICULTIES.

At the annual dinner in connection with the Derbyshire Agricultural Society the other week, Mr. Coleman, Park Nook, Derby, read an interesting paper on "Landlords' Duties and Tenants' Difficulties," the substance of which was as follows:—

Before he commenced his subject he wished to congratulate the Society upon having a practical farmer in the chair upon that occasion—for he believed that there was nothing better for a landlord in this district to do than to learn a little farming. Let him go to his tenants and ask a few plain questions, and he would be bound to say he would get a few plain answers. He was sure the success of such a meeting as the one at which they were now assembled was greatly enhanced by having such a young nobleman as Lord Loudoun to preside over it. The subject which he had put on the paper was so extensive in character that he did not suppose he could do more than merely give a sketch of it. The first thing which a landlord ought to do when he had a farm to put into market was to offer it at a fair and equitable rate; for, unless they did so farmers could not get on, and they did not enter upon their work with the heart they ought to do. If they as a body of men were to farm profitably to themselves, the farms must be let to them at a fair and proper rate, and this they could ensure by simply not giving more for their farms than they thought they were worth. By pursuing this course they might depend upon it that landlords of this country would soon find out that a fair rent and a good tenant were far preferable to a high rent and a bad tenant. He held in his hand a very clever pamphlet, written by the Duke of Argyll, in which the writer said that long leases were the very best thing they could have, and that he would put a farm into competition at the end of one of those leases; but he (Mr. Coleman) looked upon the question of farming as a partnership between the landlord and the tenant, and unless they had thoroughly understood one another and applied this system of partnership upon an equitable basis, they in Derbyshire would not be in the position they were now, either as landlords or tenants. The next question which he considered of importance was the kind of agreement which they possessed—what would the landlords allow them to do—what would they compel them to do, or try to stop them from doing? The condition of a tenancy was one of the most difficult problems which a man placed in their position had to solve; and amongst the many farmers whom he had met there were few who were agreed on this point. He contended that the relationship which existed between them should be similar to that which existed between partners in the commercial world—one should not try to overreach or take advantage of the other. But to bring about this state of things there must be certain agreements entered into, which, however, did not imply that the landlord should not allow an enterprising good tenant liberties over and above what he would allow a bad one. In this artificial age, when all were taxed to the utmost, agents must give advantages to the men who would help them to add to the value of the property; if they did not do that they would not be performing their duty. Many landlords, however, he was pleased to see, were beginning to keep their eyes open, and did not trust to their agents entirely with respect to the condition of their tenants. Another duty of the landlords was to see, when they let their farms, that proper accommodation was provided for the valuable stock which would be put upon them. This demand for accommodation was becoming greater every year. In Derbyshire farmers did not depend solely upon the crops of corn which were produced, and as long as they could keep the pastures in the state they had been in this year, so long as they could keep the quantity of stock which had been kept this year, so long should he see such happy faces as he observed in that room on that occasion; but in order to do that it was necessary for the landlords to ascertain that there was the requisite accommodation for the cattle. As he had gone about the country he had seen the miserable places in which many cattle were housed, and it was therefore no wonder that disease existed amongst them—that they were not in such a condition

as they ought to be, and that they did not pay the tenants as they ought to do. He trusted that the landlords would see to it that their farms had upon them good buildings for the cattle, and that the tenants would also take good care not to pay as high rents for farms upon which there was no accommodation for cattle as for those where good buildings were erected. Those things were in the farmers' own hands, and they ought to encourage the landlords to provide the requisite accommodation for their cattle by showing their willingness to pay a proper percentage for good farms. There was one particular thing in reference to accommodation which had struck him very forcibly; it was the tremendous waste which had been going on with regard to unthatched hay ricks. Hundreds and thousands of hay stacks in this district had been allowed to stand for a whole month and had been spoiled, simply because the owners had not possessed straw with which to thatch them. He would, therefore, ask why the tenants did not go to the landlords and request them to build hay barns? Why did they not tell the landlords they could afford to pay a certain rate per cent. if they would build hay barns? For the want of this accommodation was one of the greatest evils of the district. The farmers in this neighbourhood had found that it did not pay them to grow corn, and therefore they were deficient in straw; but they wanted certain accommodation for their hay, and while they had a right to ask for this to be provided, they ought to be ready to pay for that provision. One thing which he wanted the farmers to interest themselves in more than they had done was the accommodation which the labourer required in his cottage. Farmers were beginning to feel the want of labour, and this had arisen mainly because in a great many districts the labourers' cottages were not fit to be inhabited. He did not know that this was so much the case with this immediate neighbourhood, but in other agricultural districts, and especially in the Eastern counties, the best of the men were obtaining other employment, and the result would be that when the young labourers grew old, they would have to do the whole of the work, unless the landlords and tenants were willing and able to provide some means of keeping a larger population in our villages and agricultural districts. Another thing in connection with this cottage accommodation he should like to mention was that he desired to see land attached to many cottages, so that the occupants could keep a cow. This was not wanted so much for their own labourers, but it was desirable so to act as a reward to those men who had laboured on the estates for a number of years. Another duty which the landlords owed to the tenants, whether they retired with fortunes or not, was to pay them for necessitous improvements. Mr. Evans, one of the respected members for South Derbyshire, had said he was afraid that Parliament had not done much for farmers during the last Session, and that it would not be able to do much for them. He (Mr. Coleman) did not regret this, and thought that the best thing Parliament could do for agriculturists as a body was to leave them alone. After the attempt which Parliament made when passing the Agricultural Holdings Act, which neither farmers, landlords, nor tenants could understand—after that example of legislation, he felt that he was quite justified in saying farmers wanted nothing but a fair field and no favour. After quoting from a pamphlet which he wrote upon the subject of agriculture four or five years ago he said that any tenant who had farmed his land as he ought to do ought to be remunerated to the fullest extent possible for the improvements he had made, and he should always be willing to carry out this principle. One of the difficulties which tenants had to encounter was the vexed labour question. They could not get the labour they required, or obtain it at the price they could afford to pay, neither did they get such an amount of labour performed as they were entitled to receive. The main cause of this was the past prosperity of the country, which had attracted all the best men to the towns, where they could obtain better wages than farmers could afford to give them, while they also worked shorter hours. They had now to consider how they could keep good farm labourers, but in this respect more depended upon the

landlords than upon the tenants, for unless good accommodation was provided for the labourers, and some inducement was held out to young men to remain in the country, they would certainly migrate to the towns. He hoped this question would be taken into consideration, and that the time was not far distant when they should be as well off and have as good a class of labourers in their employ as they had prior to the last ten years. There was no doubt that farmers would employ more labour if they could afford to do so. He frequently saw things neglected, and on being bold enough to inquire the cause he was told that it was in consequence of the scarcity of labour, and the high price of it. He believed this to be in a great measure true, and therefore he hoped and trusted that the labour question would be taken up, and that the tenants might have more and better labourers than they now possessed. Another difficulty under which tenants laboured was their want of capital, which had arisen not because their profits were less but because everything they brought on to their farms cost more money than formerly, and consequently more capital was required to work the same land than was the case ten years ago. In consequence of the times not having been very good, the farmers' capital had decreased instead of increasing; they knew what an amount of money it took to stock good grass land, and to till clay land, and would concur with him when he said that one of the greatest drawbacks at the present time was the want of capital. He did not mean to say that the want of capital was felt solely by the tenant farmer, because this was also experienced by the landlord, and therefore there was no reason for them to find fault with each other; only that they must remember that the purchasing power of a sovereign was not much less than it was some years ago. With this want of capital had come an increase of expenditure, and one difficulty which the farmer had to contend with was that when the expenses did increase, when they had got into a certain way of living and spending money, it was very hard to stop. As more had to be paid for everything than was required, additional capital was needed; he, however, hoped the advance in prices had reached the maximum, and that it would not go on in the same ratio as it had done. Another difficulty which tenants had to meet in many districts—not in this, he was happy to say—was the insufficient liberty given by the landlord to till the farms as they liked. It must be remembered that they were living in an age when a man was bound to make the best of his farm, and if landlords wanted to increase their rents, or to keep them at their present rate, and also desired to see their land properly farmed, they must give the tenants perfect freedom, within certain limits, in carrying out their own mode of management. He remembered that when the milk trade was first commenced in this district he was asked by a landlord whether it did not injure the farm to take the milk off and sell it. He did not answer the question when it was first put, but on going over two or three farms and making observations, he found that the farmer who was selling his milk had more money coming into his pocket than if he made cheese, and, consequently, having more money to spend, farmed better. The next time, therefore, that the worthy landlord put this question he

told him by all means to let his tenants sell all the milk they were able. He was decidedly of opinion that if a man was allowed to manage his farm in a more liberal manner, farmers would have an opportunity of doing things which their forefathers never dreamt of. He did not think a good farmer was encouraged as much as he ought to be—while he did not believe that a bad farmer was told often enough what sort of a member of society he was. He looked upon a bad farmer as a curse to the district in which he resided, and he was certain the company would agree with him when he said that it was the duty of both landlords and tenants to do the best they could with the land in order to provide food for the teeming millions, and unless they kept each other up to the mark they were not doing their duty to the country at large. He was once asked by a leading landlord how long British farmers as a class would continue, and his answer was, "As long as the landlords." It was a very curious fact that in no other country except England were there tenant-farmers, and here again he would say that so long as landlords and tenants studied each other's interests, so long would the tenant-farmers prosper, and the land be managed as it ought to be. Within the last few months a large supply of American meat had been received in this country, and his audience knew by what means the Americans were enabled to send them those supplies. It was some years since cheese factories were inaugurated at a similar gathering to that at which they were now assembled, and he was about to suggest a movement, which he should like to see started under similar auspices. Frequently in the summer time people living in large towns could not get meat fit to eat, and he wished to ask the worthy Alderman and members of the Derby Town Council whom he saw present, if they could not learn a lesson from what was going on around them. Farmers sent into the towns some of the best meat that could be produced in the summer time, but unless it was killed one day and consumed the next it was not fit to eat. But the fault did not lie with the producers; it was the receivers' fault, because they did not keep the places in which it was stored in proper condition. What was required was the erection of cold store-rooms near the slaughter-houses, in which meat could be kept, and he had no hesitation in saying that if this plan were adopted they could keep joints in the store for a week in the summer time, and even then have the finest legs of mutton that could be desired. As a farmer he should like to see this movement inaugurated in Derby, and the probability was that if this plan was carried out the farmers would get a better price for their animals, there would be less waste, everything would be made the best of, and the producer would get the credit of sending good meat into the market. As an instance of the benefit which would thus result, he might state that a butcher only a short time previously told him that if he could have a slaughterhouse, with a room provided where he could hang his meat, he would give £100 a-year. That led to the inference that if one butcher was able to do this, other butchers could do the same, and went far to prove that the plan he had suggested was well worthy of consideration. He concluded with a few general observations, and resumed his seat amid applause.

SIR LAWRENCE PALK ON THE AGRICULTURAL HOLDINGS ACT AND LOCAL TAXATION.

At the annual dinner of the Colyton Agricultural Society, held at Axmouth on the 12th Oct.

SIR LAWRENCE PALK, after alluding in humorous terms to the hardship of expecting a county member to make a fresh speech at each meeting which he attended, said: Last year they passed the Agricultural Holdings Bill—an Act of very great importance. At the numerous meetings he had attended during his public life he had heard from agriculturists' complaints of want of security for the money they would willingly lay out on their estates. The Act of last session seemed to him to remove this cause of complaint, and as it had not received quite the attention it deserved, and as many were hardly aware of the advantages it conferred upon the landed interest, he would state shortly what were its principal features. By the provision of this Act there were three classes of compen-

sation. In the first class compensation was to be allowed for drainage, erection of buildings, laying down permanent pasture, oser beds, irrigation works, making gardens, roads, bridges, water courses, ponds, walls, reservoirs, works for supply of water for agricultural or domestic purposes, fences, planting hops, orchards, reclaiming waste land. In the second class, burning, chalking, claying, liming, and marking land, and clay burning. In the third class compensation was allowed for the application to the land of purchased artificial or other purchased manure, and for the consumption on the holding by cattle of cake or other feeding stuff not produced on the holding. Under the operation of this Act the tenant could now obtain compensation for these improvements. The Act was carefully drawn, and it conferred upon the agricultural community that which no lease he had ever seen would confer,

and for this reason—that all the leases he had seen contained such onerous and absurd clauses that no man could really farm in accordance with his lease. He was against all restrictions upon farms. His idea of agreement between the landlord and tenant was this—that the landlord should let to the incoming tenant his farm in complete and perfect order, the land in a perfect state of cultivation, so that the man entering on the property might be able to farm at once at a profit. This could only be effected by the outgoing tenant leaving the estate in proper cultivation. All the restrictions prohibiting the sale of straw, requiring the home consumption of all hay, and providing for cropping and so on, were absurd and utterly useless if they kept this fact before them—that the farm should always be well and thoroughly cultivated, and never be raked out. He had several tenants who farmed largely near Exeter. But few of them had leases, and he should be very loth to remind those who did possess a lease that every day in the week they broke it. As he drove to Exeter he frequently saw hay and straw being taken into the City, and as he came back he generally passed some waggons laden with manure returning to the farms. It was undoubtedly best that the tenant should be left alone, and if he removed certain hay or straw he would undoubtedly benefit himself and his landlord by bringing back manure which would be more valuable to the estate than the hay and straw taken off it. As a landlord, he thought the fewer restrictions they could put on the tenant farmer, and the more security they could give him for his improvements and the outlay he made on the estate the better for all classes, because the larger would be the crops they would grow. Another matter he should like to bring before them was the rating of agricultural property. Now all very well knew that for years and years burdens had been placed

upon the land which the land had no right to bear. He held in his hand a pamphlet of a paper read by Captain Clark at the Bedale Chamber of Agriculture on the Valuation Bill of last session, which, owing to the "Obstructives," the Government were unable to pass. Captain Clarke complained that there was a great difference made between manufacturing and landed property. An ironmaster on account of the perishable materials of which his blasting furnace was constructed was allowed in the rating a deduction of 33½ per cent. Land was allowed for depreciation on gates, bridges, fences, water-courses, and roads a deduction of five per cent., which on this head was, perhaps, a fair deduction. But Capt. Clarke's argument was that in connection with land there were other exhausted and weakened parts requiring renewal of far greater importance than hedges and so on, and deductions should be allowed for these just as were deductions for the wear and tear of machinery, blast furnaces, &c. He (Sir Lawrence) was much struck with this. Undoubtedly the stock of the agriculturist was always suffering depreciation. Their machinery, their ploughs, their horses, their tackle, all depreciated, just as a blast furnace was injured by time. Capt. Clarke pointed out that all these had to be replaced, besides which the farmer had to add to the soil that which was drawn from it by the crop, and the root crop itself was but an outlay of capital preparatory to the growth of crops which would remunerate hereafter. This being so, why should there be but an abatement of five per cent on the assessment of agriculture whilst there was 33½ for manufactories? He alluded to this subject because it was likely to come on in the next session of Parliament, and because it was one of those matters upon which members of Parliament especially desired the advice of their constituents.

AGRICULTURAL SPEECHES AT BRAXTED.

From a full report of the meeting of the Great Braxted Agricultural and Labourers' Friend Society in *The Essex Standard*, we give the following extracts:

The CHAIRMAN (Mr. E. A. Coope, M.P.) in proposing "Prosperity to the Society," said the meeting that day must have satisfied them that the Society was doing a good work, and he believed such meetings tended in a measure to elevate the agricultural labourers, which should be the desire of all connected with agriculture. We had a great contest to carry out in supplying the country with food. It was an admitted fact that the agriculturists of the country were unable to meet the demands made upon them, and that we were obliged to go to other countries to supply us with something like 30 millions of quarters of grain, and 200,000 head of cattle a-year, and a venerable agriculturist (Mr. Wm. Fairhead) had that day expressed a desire for the return of the old days of Protection. (Mr. Wm. Fairhead: "I say so," followed by laughter). Those might have been good old times, when the agriculturists could in a measure meet the supply of the country, but the population had so increased that they were not now able to meet the supply. He did not say they would not be able to meet it, but it could only be by bringing into cultivation woodland and other uncultivated land, or by improved modes of agriculture—(Mr. Meehi, hear, hear)—such as Mr. Meehi had indicated from time to time. He did not say that all Mr. Meehi had told them was strictly gospel—he looked upon that gentleman as most useful among other pioneers of improved agriculture, and it was incontestable that while other industrial pursuits must go with the times, and adopt the very best system of machinery, agriculture could not remain the exception, but must also progress. They had unfortunately to deplore another short harvest. The root crop was exceedingly promising till within a month ago, but the hopes of those who had anticipated an exceptional crop, had in a measure been disappointed. He was fully alive to the trials of agriculturists, and he wished their business was more prosperous, but he could not help thinking that with that dogged energy characteristic of the English mind, and with the skill that was shown among agriculturists, they still had a happy and successful future before them.

Sir C. DU CANE responded. In the course of some preliminary remarks, he spoke of the prosperity and success of the

Society at the present moment as being substantial realities, and said that their meeting that day had been fully up to the average of the past in every particular. Referring to the prizes given for school attendance, and for proficiency in Elementary Education, he incidentally expressed his concurrence with Mr. Rowlandson, as to the operation of the Education Act in the Braxted District, and said he looked upon those prizes as being more effective instruments towards filling our schools than all the pains and penalties of compulsory by-laws. As one sad drawback to the pleasure of the present meeting, he alluded to the fact that since they last met several old friends had been taken from them, and he especially mentioned the late Sir Thomas Western and Mr. Herbert Leigh, to the memory of both of whom he paid a graceful tribute. Passing to the brighter side of the yearly picture, he said he trusted that the undiminished interest which these annual gatherings excited in the neighbourhood might be taken as a proof that the Society was doing the good work which it was intended to do, and that both employers and employed continued to recognise the value of such an Institution. No doubt continued Sir Charles, there was a time in our history, in those fine old Protection days which my old Tory friend Fairhead seems anxious to bring back—when Societies like these did not exist, and the time may come, as in some districts in this country it would seem to have come already, when it will be felt that they have done their work and need exist no longer. But I, at all events, am not one of those who think that the coming of such a day should be prematurely stented; on the contrary, I see many reasons at the present time why we should all combine to postpone it as long as possible. We know perfectly well that we are not the only people in this country who profess to be the labourer's friends, and that he has friends and counsellors of a very different character, whose aim and object is to set class against class and to stir up something very little short of a complete agricultural revolution. And with the knowledge of such a fact staring us in the face, I must say I think it would be a very suicidal policy for employers of labour voluntarily to leave the labourer to his fate, and to proclaim, by withdrawing from these societies, that all their interest in his future welfare is at an end, beyond the mere amount of manual labour they can extort from him by the sweat of his brow. Such a course is tantamount to saying to the labourer, "Go your own

ways from henceforth, and so long as we get our fields cultivated and our harvests gathered in, it is nothing to us how you are housed and fed, or how you may bring up your children, or how ignorant and improvident you may remain as a class." Surely such a course appears to me to be playing the very game of those who are endeavouring to promote agitation, and who would leave no stone unturned to widen any breach that they may find already existing between employers and employed. Now I say, unhesitatingly, that whether we look to the agricultural or the political future of this country both are vitally dependent on the increased intelligence and the increased growth of habits of temperance, thriftiness, and morality amongst our labouring classes. It is next door to a truism to say that every onward step in the march of agricultural progress requires increased skill and intelligence on the part of the labourer to keep pace with it, while, as regards our political progress, I have no wish to be betrayed into talking party politics, but, even at the risk of treading on the toes of my old Tory friend Fairhead, I do venture to say this much, that what we have to fear in the future is not so much the admission of fresh numbers to the franchise—(Mr. W. Fairhead: "God bless you, the worst thing I know of.")—as of numbers steeped in ignorance, and made alike reckless and disconcerted by their own improvidence. Surely as I think it stands to reason that the man who has been educated to habits of providence and thrift, the man who has a cheerful and well-ordered cottage home is less likely than the ignorant and improvident to risk his earnings and his savings in quarrelling with his employers. That man, too, will be more likely to stand by the cause of order and progress than the ignorant and improvident, who feel that if they have nothing to gain, they, at least, have nothing to lose by joining in agitation, and helping to subvert the existing order of things. Of course, if the labourer himself were to turn round on us, and say, "Pay me my week's wage for my week's work, and leave me alone to go my own ways. I want none of your patronage, and I look upon your advice gratis from wagons, and your prizes for ploughing, and all the rest of it as an insult," then I admit that there must be an end of societies like these. But if the gathering of to-day may be taken as a sign, I do not think that that is the spirit in which our prize list is regarded by the labourers of this district, and all I say is that if such a spirit is ultimately destined to prevail in this country, let us in the meanwhile do our best to retard its advent. For I am old-fashioned enough in my views to cling fondly to the triple bond of union between landlord, tenant, and labourer, that has hitherto been such a leading characteristic of the social fabric of England. I am not yet prepared to see that triple bond of mutual interest broken up, and supplanted by what I remember our friend, Mr. Perry-Wallington last year, called the modern spirit of enlightenment, which regards all talk about mutual sympathies, and community of interest as so much sentimental cobweb, to be swept away by the pitiless besom of the commercial bargainer. If I refer, before I sit down, to the more general questions of agricultural times and prospects, I feel that I am venturing on—

"An enterprise that doth with peril teem,
For everywhere my tread
On ashes falls, o'er lurid volcano's thinly spread."

But I cannot help asking our friend, Mr. Meehi, how much longer we are to wait for the commencement of that cycle of good seasons, the immediate advent of which he so confidently prophesied at our last year's meeting. My hon. friend may possibly answer that, as yet, his prophecy is only a year behind the times, and that he has been for so many years in advance of the times in all matters pertaining to agriculture, that he can now afford to be a few years wrong in his calculations, and yet have a good balance-sheet of prophecies after all in his hands. But whether the farmer can equally afford to wait for the good time that is coming is, I fear, a very different matter. Well, I am afraid that even in this neighbourhood we have not much to congratulate ourselves about; but I can, at least, tell you for your consolation that things are not half so bad here as I have seen them elsewhere. After speaking of the state of things in the North as much worse than we have had in this neighbourhood, he went on to say, I think, too, it is not impossible that during the forthcoming winter deficiency of yield may, in some degree, be compensated by a rise in price. At all events, I apprehend that even at the present time those

who have got any barley to sell have no reason to complain of the price they can get for it. I fancy, too, that even this year there have been exceptions to the general deficiency of yield, and I am quoting the opinion of a tenant of my own when I add, that those exceptions are most invariably to be found on the side of the good farmer as against the bad one. If I am wrong, remember I am not quoting my own opinion, but that of a practical farmer, and I think we may, at least, ask ourselves the question in reference to the advantage of agricultural improvements, what would have been the effect of such repeated deluges as we had in the early part of this year upon the land forty years ago, when the use of a draining-tile was comparatively unknown, and much of what is now our finest corn growing land was then unfit for cultivation? After some further observations, Sir Charles concluded, by proposing "The health of the Chairman."

Colonel BATES, M.P., said he had not for several years been able to congratulate them upon agricultural prosperity—they had had their losses and difficulties, and still they were somewhat on the horns of a dilemma. They had to feed cattle that didn't pay in order to produce corn that didn't pay; but nevertheless, they bore all this remarkably well under the circumstances. They had found out this year there was one difficulty they could not overcome however clever they might be, and that was the difficulty of the seasons, which would beat them, and it certainly was desponding to those who expected six quarters an acre to get only three and a-half or four. However, they must not take too desponding a view of their position, but look on the bright side. What was the bright side? Well, they had plenty of roots—plenty of partridges—and plenty of foxes. Having remarked that partridge shooting was an amusement as well as fox-hunting, and could be enjoyed by the occupiers as well as owners of property, and rejoicing that hundreds of occupiers in the county enjoyed their day's partridge shooting as well as fox-hunting; he went on to refer to the legislation of the past Session. He said he had not much to tell them as to what they had been doing for them in the way of legislation. All he could say was that they had assisted them in some degree by the very excellent measure that had been passed for the better management of prisons, which would prove of great advantage to the country and a great saving to the pockets of the ratepayers. But there was one thing Parliament had not done this last year, namely, it had not put on any fresh taxation—whereas, since he had had the honour of representing them, scarcely a year had passed without it. Notwithstanding, this, however, and the fact that the administration of the Poor-law was carried out most economically, and the amount of out-relief especially was much smaller than it used to be, it seemed their rates increased. Their sanitary rates, their highway rates, and their education rates, were increasing day by day, and they required constant vigilance and supervision. In a parish in which he had to pay rates, the last half-year's rates for education under the School Board—which he hoped they would avoid if possible—was 1s. 8d. in the £. That, he thought, ought to be known, so that they might not in other places fall into the pit if they could avoid it. After remarking that no doubt the expenses of education must increase, and that notwithstanding the statement of Mr. Chamberlain that the average increase of drunkenness in the country exceeded the average increase of school attendance, they must not be discouraged in the cause of education, for they must not expect to feel the advantages of the recent legislation on that subject for several years to come. Mentioning as part of the legislation in store for them next Session the subject of how they were to save their flocks and herds from diseases brought here by the importation of cattle, he said they were not open to the charge brought against them by their opponents, of wishing to bring back Protection, but they merely wanted to protect their flocks and herds from disease brought from abroad. The gallant Member advocated that compensation for the slaughter of animals suffering not only from cattle plague, but also from pleuro-pneumonia and foot-and-mouth disease, should be paid out of the Imperial exchequer, instead of from local sources; and he also spoke at some length in favour of the establishment of County Financial Boards. He urged the farmers to keep their spirits up and look forward to brighter prospects in the future, to not only cultivate their lands, but also kindly feelings among themselves, and among those whom they employed—to be grateful to the latter even if they did

not get any gratitude in return—and then they might look forward to a continuance of those happy good old times when landlord, tenant, and labourer were united together in one common bond of union.

Mr. MECCHI, in responding, remarked that the true meaning of agriculture was the combination of landowners, and occupiers, and labourers to produce food for the people. He was one of those who did not believe this country was half farmed, and he felt humbled when he found no increase in the production of food and that they fell short of feeding half the population. Mr. Caird had told them that while trade, and manufacture, and commerce had enormously increased, agriculture comparatively had stood in the rear; and why was this? It was owing to the fact that more capital was not invested in the land, partly to the want of security for the capital invested, as to which subject he had expected to hear something from the Members that evening. As to the Agricultural Holdings Act, he mentioned that he had been told Lord Cholmeley had placed himself under the Act and was astonished what a flow of capital was coming in to the improvement of his property. If there were many cases like that, they should be known; for he did not think the landlords desired to keep the farmers and the public from the benefits of that Act, but were afraid it would be injurious to themselves and no benefit to the country. He urged that security for capital was the only means by which capital would flow into the channel they desired; and that it was for the interest of the landlords to put themselves under the Act in question, which was not a one-sided but a two-sided measure. How was it that Tiptree Hall Farm had so much improved since he commenced his improvements there 35 years since? By the conjunction of the landlord and tenant (who were both represented in himself), being of one mind in agreeing to drain the land, knock down the fences, and not to burden the land with too much game—and granting liberty of action for the tenant to farm as he pleased, provided he did not injure the land. He would repeat what he had already asserted publicly, that if as much food were produced over the Kingdom as was produced over his farm, the people of England could be fed without any foreign importation. In the course of some further remarks, he said his present year, although not like 1968, would, he had reason to believe, be a satisfactory one as regarded profit—and arguing that in the management of stock the English farmers were strangely deficient, he counselled the

abolition of dungheaps, the use of covered yards for stock, and so forth.

Mr. FAIRHEAD after speaking of the usefulness of these gatherings as affording an interchange of opinions and ideas among the owners, occupiers, and labourers, alluded to the Education Act, and said as it was the law of the land they must make the best of it. Their Members had spoken of the Universities Bill—for the education of the higher classes—and he trusted that next year they would tell them they had a scheme for a good middle class school, where the middle classes would be educated at a much lower rate than at present. It was very hard upon the lower middle class that they should have to pay so high for their education, when the yaw others having it for a mere nothing. Mr. Mecchi, for whom he entertained the highest respect, told them they must grow more corn and keep more stock, but the man who said that should do it himself. Mr. Mecchi also advised covered yards to protect their stock; but although he (Mr. Mecchi) had covered yards, if he was rightly informed, he had no stock in them. He did not think, moreover, that Mr. Mecchi used his irrigation machinery six times in a year, and he had supposed it was all destroyed until he saw it in use once recently. Keeping a lot of machinery out of use must be waste of capital. As to the allegation that sufficient capital was not invested in the land, he believed the whole of Messing had £5 an acre more capital in the land than Mr. Mecchi had. He admitted Mr. Mecchi had done some good in taking down pollards, and recommending landlords to allow their tenants to do the same, but he was not the man for the tenant-farmer to follow if he wanted to bring up a wife and family out of the profits of his business. He was not speaking offensively, for he should be sorry to offend Mr. Mecchi, whom he highly esteemed, but on these occasions they must deal in plain truths.

Mr. MECCHI said after the ungenerous attack made upon him by Mr. Fairhead, who professed to esteem him so much, he wished to make an explanation. Mr. Fairhead knew perfectly well that for 25 years, until he lost £30,000 by the Bank, he had from 60 to 90 bullocks and a very large number of sheep and pigs upon his farm; and he had told the farmers of England that owing to his losing that money he was obliged to discontinue keeping so large a quantity of stock. Mr. Fairhead also knew that he still irrigated his land, and although he professed to esteem him (Mr. Mecchi) so much, he believed there was not a man more jealous of him, or one who disliked him more.

THE WINTER FEEDING OF CATTLE.

At the annual dinner of the Boroughbridge Agricultural Society Mr. A. S. Lawson, President, in the chair, Mr. J. Ford, of Tancred, Whixley, read a paper on "The Winter Feeding of Cattle," of which the Hon. Sec., Mr. Thomas Scott, of Grantley, has sent us a copy:—

Mr. FORD said: The production of meat in this country was a subject of growing importance, and might be regarded from a national or in a monetary point of view. In considering how far the artificial or winter feeding of cattle could be made profitable it was necessary to deal with the idea that the process was by the extra outlay in feeding stuffs, and in attendance, too costly. He had been told that he would soon tire of it, but he still continued the practice. He had no intention of throwing disapproval upon summer grazing, though there were writers who regarded the latter as wasteful, both in grass and manure. Grass-fed beef was too highly appreciated and the beauty of our landscapes too closely allied with the browsing of cattle upon the rich pastures of the rural districts to admit of a radical change from a practical or picturesque point of view. Winter feeding, however, he held, as a valuable auxiliary to our meat supply, might be made to pay not only in the carcass value, but because a large supply of valuable manure was left behind. There was a difficulty in winter feeding arising from the want of such covered buildings as were held to be necessary, for though it was not disputed that beasts might be well fed in open yards the question arose whether animals so fed did actually leave that element of profit behind them which it was asserted they might, under other conditions, undoubtedly be made to do. In animals fed in open yards there was the lack of the warmth essential to the

accumulation of fat, the want of means to ensure each beast getting its share of food, besides the inferiority of manure. It was to be hoped that landlords building or remodelling farms would take into consideration the expediency of providing such covered accommodation for winter-fed cattle as would enable farmers not only to adapt their means to the requirements of the times, but to their own individual necessities. He was strongly in favour of the box system of winter feeding, and the construction and arrangement of the boxes were pretty well understood. It must be enforced, that for the profitable feeding of cattle, the system, whatever it might be, must be carried out with a due regard to economy of labour, both in attendance upon the stock and in the removal of manure. The want of a sufficient supply of roots embarrassed those who wished to turn out a given number of winter-fed cattle, and to winter a large head of stock for summer grazing. There was in this country a large amount of very inferior grass land, not including that which would not carry the proverbial "goose an acre," and which was incapable of carrying feeding beasts beyond a given point. Land of this class turned out every year a large quantity of half-fed cattle, which came into the market as beef. In October and November the markets were glutted with beasts reported as "inferior," and which realised very inferior prices. These were the animals which should come in for winter feeding, beginning the winter half fat. Very few farms were without such land as he had described, and if these poor bullocks were bought in the spring, and summered upon a daily allowance of half and half cotton and linseed cakes, they should in October be proper subjects for winter feeding. It was a wasteful expenditure of time

and money to bring into the house lean animals which would occupy the best half of the winter in getting straight. In order to secure the greatest amount of profit, or in other words, the greatest development of fat in a given time, the time should not be accepted in recruiting animals from the emaciation of the lean market. Such a beast as the one last described would not be found to consume the quantity of roots which a really lean one would, for a lean animal would eat as much in one month as the other would in two, and not show half the improvement for it. A moderate allowance of sliced roots sufficed for an animal forward in condition, while the turnip supply might be further economised with pulped roots mixed with dry food, such as chaffed straw with concentrated flesh-forming auxiliaries, such as pure linseed and cotton cake mixed—an excellent method by the way of keeping down the cake bill—to the extent of six or seven pounds a day, with barley meal in the pulped food in the later stages of feeding. This would bring an animal on quicker and more satisfactorily than an inordinate supply of cold watery roots. When they took into consideration the fact that nine-tenths of turnips were composed of water, it did seem an extraordinary thing that some feeders would allow a full supply of roots—a waste, as it appeared to him, of the digesting powers and the powers of assimilation of a feeding animal. Experience would teach what was the maximum of flesh-forming food which a beast would assimilate in a fixed time with profit, for he did not hold with some that an unlimited supply, say, of linseed cake as much as a beast could be induced to eat, could be profitably given. They might largely increase the value of the manure heap, but the animal would not give full return for value received; they were not getting the full return as they should do at both ends—both in the carcass and also in the manure. Having made reference to chopped straw in the economical feeding of cattle he could omit to call their attention to the admirably written and exhaustive treatise upon its use in the recent number of the Royal Agricultural Society's *Journal*. They had further the authority of Mr. John Colman, who said that he was quite certain that by the proper use of chopped straw and pulped roots that one-third to one-fourth more cattle could be kept on a given area of land. They thus saw how much depended in the profitable feeding of cattle upon the free use of straw made palatable by the various processes which were known to all farmers. Straw early harvested and well won contained in itself feeding properties, then by chopping, steaming, or mixing with treacle, meal, linseed, locust beans, or other flesh-formers—the straw for bulk, the other a sauce piquant, at once appetising and feeding—they obtained a food supply, which combined with a moderate supply of roots he certainly thought was more rational and more likely to attain the end in view than to fill the animal with a cold indigestible and watery material containing 90 per cent. of water. When viewed in this light it almost appeared strange that they had so long continued what he could not but regard as an unreasoning treatment of house-fed cattle. The longer an animal could be kept on into the spring, that was to say the longer the food supplies could be made to hold out, the larger ratio of pay would be obtained for keeping, with the probability of increasing value in the market. When the days lengthened and the weather improved a corresponding improvement exhibited itself in the beasts. From the fact of being under cover feeding beasts would sweat freely, and they consequently early quitted the old hair, and it was then that they would mend fastest. He need not impress upon them the importance of punctuality in attendance. If feeding animals did not get served at their accustomed times they became restless and uneasy, whereas so soon as their meal was discussed they would lie down and ruminate, when they should be left quiet and undisturbed. If at such times they did not chew the cud of bitter reflection consequent upon inattention to their wants they might depend upon it that it was at such times, during repose and rest, that they repaid most for all the care bestowed on them. Whilst carefully promoting warmth they ought not to omit to provide ample ventilation. A well kept feeding house containing a number of animals should not be offensive to the most delicate olfactory. Take care that they lay dry, and then all effluvium was thus absorbed by the litter. With a moderate supply of roots water was unnecessary—they would not touch it. If roots were limited and much dry food substituted, water then became essential to their well doing. Although he considered that winter fed animals should leave a fair profit for such treatment as he had described, in

the carcass value alone, he must nevertheless tell them that all the profit was not there. The manure left was an important element in the calculation, and as agriculturists they knew that the operations of the farm were so blended one with another that in the matter of profit and loss it was not always easy to say where they began and where they ended.

A discussion followed the reading of the paper.

Mr. BARROBY thought that they all ought and would feel much obliged to Mr. Ford for what he had brought before them; still there were one or two things in the paper with which he (Mr. Barroby) should be disposed to disagree. An enormous amount of space was required in the carrying out of the box system, whilst there was a very large amount of cleaning work about them. Mr. Ford had not entered into any figures, as he might have done, as to the cost under these heads. He (Mr. Barroby) was of opinion that taken in opposition to summer feeding, winter feeding was very much behindhand, but at the same time he agreed with many of Mr. Ford's remarks.

Mr. BENNETT observed that no one who went over Mr. Ford's farm could but be pleased with the system he adopted for the winter feeding of cattle; still he (Mr. Bennett) should, with Mr. Barroby, like to have heard something more about the cost of the article produced. He (the speaker) was of opinion that the manure from the box system was much superior to any other; nevertheless he was doubtful whether the profits were commensurate with the expenditure. He himself was not favourable to winter feeding at all. He never, as a rule, found it pay. At the same time, he quite agreed that there might be localities favourable to winter feeding. So far as his experience went, the more turnips and the more cake he gave the beasts the faster they fed. He was one that preferred feeding an animal up in a short time. That might not be so well to the butchers, but that was not his look out.

Mr. JACOB SMITH said that he did not do any winter feeding because he did not find it pay him. His farm and Mr. Ford's were altogether different. No one, situated as he was, would find winter feeding profitable. He might say, however, that he never saw cattle so comfortable as those of Mr. Ford. As to how the box system paid him he could not say, but from what he had seen of the winter feeding conducted at Mr. Ford's, if he (Mr. Smith) had convenience for it and went in for winter fattening, he should have no hesitation in adopting the box system. He agreed that much could be saved by using pulped meat.

Mr. HARLAND remarked that at this particular season it was very important to those on tillage farms to know how to economise. They had not all an elaborate system of boxes fitted up, and they were obliged to put up with something less. The animals must have heat in some form or other. Turnips and oilcake summed-up to a good deal of money. He found that maize or Indian corn given with oilcake was one of the best feeding-stuffs at his disposal; but the maize must not be inferior.

Mr. FORD remarked that his paper was not antagonistic to grazing nor to any species of feeding. He merely wanted to urge the importance of winter feeding as an auxiliary to our meat supply. He had not represented his own small farm as a representative one for winter feeding—he had only casually alluded to it.

Mr. SCOTT (the vice-chairman) said that he was one of the first to begin pulping in that part of the country, and he most certainly stuck to his old conviction that there was in it great economy. A greater variety of food was used, and they could scarcely use too many ingredients in fattening cattle. He used 20 tons of rapecakes every year in the fattening of cattle, but they must be mixed intimately with other food. Unless they were so mixed they were not very palatable. There was no doubt that a load of manure made under cover was worth two outside, but then there was an enormous expenditure involved in box feeding. What was wanted was an experiment made between a number of cattle under the box system and a number on the open yard system.

Mr. FORD having replied,

Mr. SALE proposed the health of the Secretary and the Vice-chairman.

Mr. SCOTT having replied, a vote of thanks was given to Mr. Ford for his paper.

A LANDLORD AND A TENANT ON AGRICULTURAL TOPICS.

At the annual dinner of the Muford and Lotheringland Agricultural Association, the Chairman,

Col. BARNES, M.P., in proposing the toast of "Success to the Muford and Lotheringland Agricultural Society, and Success to Agriculture," said he should call upon Mr. James Peto, a most worthy representative of the agricultural interest, to respond. With regard to this Society, he was happy to find that it was in a prosperous condition; but when he turned to the members of the Association he feared he must tell a different tale. He was afraid they had had a third bad harvest in succession, and from what he could make out this was the worst of the three. This was a serious situation, not only for the agriculturist, but for many other classes, and he did not think he was wrong in regarding it as a national misfortune, and for this reason: it was shown by statistics that, during the last 5½ years 160 millions more money had been spent in buying wheat to feed the people of this country than during the preceding 5½ years, and of this money something like 64 millions had gone out of the country which, if we had had good harvests, would have gone into the pockets of the farmers. This not only told on the farmers themselves, but on those who lived in towns—manufacturers and tradespeople. Most townspeople lived on the country in some way, as the country people bought that which was produced and sold in the towns, and if these 64 millions had gone into the pockets of the agriculturists a great proportion of it would have been spent in the towns; but, as it was, it had gone abroad. From the returns he had seen he thought there was a prospect of corn being at a higher price for a year-and-a-half, or at all events whilst the present war lasted, and this not only on account of the war, but on account of the bad harvest throughout Europe, except—and this was a curious coincidence—in Russia and Roumania. In France the wheat crop was 30 per cent. below the average; and if they turned to the barley crop, in the whole of Europe, except in Russia and Roumania, there was an immense decrease, and for this reason he thought the price of barley would be high, at all events for this year. It was an ill wind that blew nobody good. Of course when corn was high the working classes suffered, but the agricultural classes were gainers. It had been said that, during the last few years, owing to the low prices, it had not paid to grow corn, and there was no doubt that a less acreage was grown than was the case twenty years ago, and of course if the farmer did not receive adequate remuneration for his skill and labour the cultivation of the soil must diminish and trade must suffer in consequence. There was one thing he might congratulate the farmers of England upon, and that was that in England as much corn was grown on one acre as was grown on two acres in France, and not because the soil was better in England but because the cultivation was better. England with two million acres under corn produced as much as France with something like five million acres. Another matter was that the money paid for wheat from abroad did not all flow out of the empire, for though, it all went out of England, India received some of it, for India had supplied us with something like one-tenth of the corn we imported from abroad. Having alluded to the bad promise of the potato crop, the Chairman said he should like to say a word on the labour question. He was glad to find that the labourers in that district were inclined to be much more quiet than they were rather more than a year ago. He thought they saw that they had taken no good from strikes, but that harm had followed both to themselves and the farmers. The labourer by a strike lost to a certainty his wages during the time the strike continued, on the very problematical chance of an increase of 1s. a week in the end; the farmer lost the produce of his crops, and also had the loss which resulted from the increase of rubbish on his land. The only gainers, as it seemed to him, were the agitators—who went about living on the fat of the land, and putting up at the best hotels at the expense of the labourer. He quite admitted with Lord Rendlesham that the labourer had a certain amount of grievance, and it was hard for him to have to say, "I am willing to work, and I have worked, and mean to work hard all my life, but what have I to look forward to when I grow old and cannot work? I have nothing but the workhouse." But an

answer could now be given, for he could be asked why in his health and strength he did not join a provident society, by subscribing to which a moderate allowance for him in his old age would have been secured. Of course he must choose a society which was stable, but in this county there were several stable societies. There was the Suffolk Provident Society, which was supported by men whose names rendered it impossible—the word was hardly too strong—that it should break, and if the labourer chose to belong to such a society as that he had the certainty of an adequate provision for his old age. It seemed to him (the Chairman) that the object of the labourer ought to be the prosperity of the farmer. It was quite evident if the farmer was losing money he could not be expected to raise the labourer's wages; but if money were flowing into his pocket he would be much more likely to increase wages. On every ground it seemed to him that the farmer and labourer should run together and not in adverse lines. They had examples of the evils of labour disputes in the manufacturing towns, where strikes after strikes had occurred, till the capitalists became so timid and afraid of venturing their money that they took it out of the businesses altogether, in order, if possible, to put it into some more stable manufacture abroad, a dead loss ensuing to this country. He was sorry to see by the return of the last quarter that the revenue of the country had decreased £108,000. This was a most serious fact. It had not happened for a great number of years that there was a decrease on the quarter, and he hoped it was not the beginning of the downfall of the commercial supremacy of this country, but unless things took a turn it looked very serious indeed. We found other countries underselling us in our own markets. We found large quantities of iron being imported from Belgium and America, stopping the manufacture of iron here, and taking money hence to foreign countries. The farmers of England had to contend with the whole world, and when the fight was fair he had no fear but that with their energy and enterprise they would hold their own against all comers as they always had done. When they relaxed in their industry they would certainly go to the wall, and he could not conclude with a better sentiment than the wish that that day might be far distant.

Mr. J. PETO, in responding, said the Show of that day was, in a measure, a great success, but still he wished his brother-farmers would endeavour to show more of their own stock and turn their attention more to breeding stock. Of course gentlemen with long purses could buy good stock, but what he should like to see was gentlemen showing more of their own breeding. He regretted that the attendance at dinner was so thin, as he should have liked to see more of his fellow-townsmen and brother-farmers, if only out of compliment to the two members for the county. He expressed his concurrence with what Lord Rendlesham had said as to the desirability of providing good cottages for labourers, and encouraging the labourers. They all knew they could not get on without labourers and without being on good terms with their men, and if landlords would build cottages in the way the noble lord suggested it would be very advantageous. There were several matters with which Parliament might have dealt with advantage. The highways hung very heavily upon the farmers. Let them take that district. The people who live in Lowestoft travelled all over the country, but the farmers had to pay for the repair of the highways. He argued that the expense of keeping up the highways ought to be put either on the county rate or the consolidated fund. The Chairman said the revenue of the county was rather short, and if so let the expense be charged on the county rate, and then all would pay equally. Mr. Peto next referred to the importation of foreign stock, saying that what he should like to see was that all foreign cattle should be sent to Deptford to be slaughtered there, or, if store stock, to be kept in quarantine, and if the continental cattle dealers did not like to send the cattle to Deptford let them slaughter them first and send the carcass over as the Americans did, and then they could be landed at Lowestoft or any other port. Farmers did not want meat to be so very dear as at present, because they had to pay all the more for their store stock, but they did want to keep free from foot-and-mouth

disease and pleuro-pneumonia, as they were at present. He trusted their members would do all in their power to advance that object. There was another matter which was always a cause for agitation between farmers and landlords, and that was the game question. He thought over-preservation had to a great extent been abolished. He did not object to pheasants and partridges. He was as fond of sport as anyone, and though now that he could not walk so well as when he was younger he did not shoot himself, he had two sons and he let them shoot. Let gentlemen not keep rabbits, and if they kept hares let them keep just enough for a good course and to supply their own tables and to make presents, but do not let them have a great body, and when they were shot in great numbers send them to market. Suppose one had a beautiful flower garden—he had one—would he not be very much annoyed to get up one fine morning and find everything taken off? But what was that to compare with the case of a tenant farmer who had a fine crop of mangels, and just as they got out found a body of hares came and nip

them all off? If these things were attended to and the advice of Lord Rendlesham taken as to the mutual relations of landlords, tenants, and labourers, they might be one happy family and have no more of those heart-burnings which they had seen not many miles from that place, and people ruined and sold up as they had seen this Michaelmas, and that simply from the cause he had named. If he had spoken too plainly he hoped he should be pardoned, but when he saw these things so glaring and was called upon to respond to "Success to Agriculture" he could not but speak out his mind. They had had three very bad years, and this year had only three-quarters, and in some parts only two-thirds, of a crop. However, prices were better, and, as the Chairman had said, perhaps would remain so for the next 18 months or two years, and possibly the farmer might get a turn. Although he (Mr. Peto) was not a tenant farmer, but farmed chiefly his own land, yet had he not had property besides he could not have farmed as he did. He thanked them for their reception of the toast.

MR. C. S. READ, M.P., AT ACLE.

At the annual dinner of the Blofield, Walsham, and Pegg Agricultural Association, held at Acle on the 12th Oct.

MR. C. S. READ, M.P., who rose amid loud cheers, said that he had been called "the Jeremiah of Norfolk" because upon late occasions his lamentations had been great. First of all, he thought this was a sort of bye-play upon the name of his hon. friend the member for Norwich; but he found that it arose from the fact that whenever he got up to talk on agricultural subjects he had nothing pleasant to relate. He wished he could say with Lord Kimberley that their prospects this year were better than last year. No doubt they were twelve months nearer to a better season than they were last year; but when that better season was coming he did not pretend to say. There must be an end to a cycle of bad seasons, and he trusted that good years were in store for them very soon. During the last eleven years they had only had two great crops. First of all, they had three great droughts in 1868, 1870, and 1874, from which the light lands of Norfolk had never recovered. The had a most disastrous corn crop in 1867, and the last three years had been years of adversity and barrenness. That left only four years, and of those two were fairly good and two abundant. Striking the average, it would be found that during the last ten or eleven years, the seasons had been most adverse to them. Agricultural distress must result from these bad seasons. In that part of the world they had cause to be thankful for much in the past season, although it had not been a prolific one. He had secured a nice little crop in very fair condition, for he never knew such an amount of rain fall during the harvest and do such comparatively little harm. Barleys were rather improved than otherwise by the rains, because they never had any color, and they were certainly made somewhat plump by the moisture. But when they looked at other districts and found how disastrous had been the harvest, he must say that in Norfolk they had been more favoured than farmers in the Midlands and the North. Turning to the agricultural statistics he found the important fact that, notwithstanding there was a less area of corn, there was a less quantity of stock in the country, which must prove that there was a diminished capital in the hands of farmers. But this distress among agriculturists had not extended to the top or the bottom of the three divisions of agriculturists referred to by Lord Kimberley at North Walsham. With the exception of very light and very heavy land farms, where rents had certainly been considerably diminished, there had been no general reduction of rent, although, perhaps, there had been a certain stop put to recent advances. Landlords, no doubt, like others, felt the extra cost of living, and they had also to pay much more for building and repairs. At the same time he contended, that at present the landlords of the kingdom had suffered very little from the distress which had afflicted the tenant-farmer. Going to the bottom of the scale they found that the labourer received more wages for less work and fewer hours. Therefore he was better off as far

rendering worse work would be to his advantage he would not pretend to say, whatever he might think. It thus came to pass that almost the whole burden of this distress fell upon the middle man, the tenant farmer; and how much longer he would be able to bear it he would not attempt to predict. It was the cost of production, not the prices, that beat them. Prices were fair and reasonable, and they could live if it was not for the costs of production which so continually hampered them and which were increasing. With regard to capital, Sir R. Buxton had said that sheep in his district had maintained their value, and therefore the flockmasters had sold their sheep well. But then look at what it cost to stock a farm with sheep. Twenty-five years ago they could get a good flock ewe for 40s., whereas now it cost 70s.; and a cart horse for £25, whereas it now cost £50. The result was that at least half as much more capital was required as fifteen or twenty years ago, an element of consideration in farming that generally escaped those who said "Oh, you cannot be so badly off, because you have such good prices." Then another thing was the cost of machinery. They were constantly buying new labour-saving machines—very expensive articles to purchase and to keep in repair, and for their landlord to cover in if they would be good enough to do so, but he was sorry to say that he did not save in his labour bill. Foreign competition was daily increasing, the result of free trade, and they must cheerfully and manfully bear up against it. Last year he said that we must expect a very considerable importation of dead meat from American, and we had it. If it had not been for that no doubt the prices of meat would have been considerably higher. He welcomed that competition because it was an honest one. It did not bring the foreign diseases of live stock, and therefore he trusted it would succeed; but on the other hand, if we are to have that competition, the Government ought to take care that our flocks and herds are not decimated by the importation of foreign diseases, as they had been of late years. The large quantities of colonial wool imported were admirable in quality. The fleeces were sent in the most perfect order. The colonies had such a number of our long-woolled rams that they produced half-bred wool, which entirely superseded in some branches of manufacture the hogget wool for which we were once so famous. Wheat, as they knew, came from all parts of the world. It was curious that from India, though there was such a fearful famine in prospect, we last year got about 3,000,000 cwt. of wheat. It was sold to us for 50s. a quarter, and it cost 14s. a quarter for freight, insurance, and expenses. He should have thought that it was the duty of the Indian Government to have stopped some of this wheat. But not so. Only last July there were 83,000 quarters sent from Calcutta alone to this country. It was marvellous that whereas the people were actually dying in India from starvation and want by hundreds and thousands, wheat was still sent out to this country at a less cost than we could grow it at home. Barley was the crop that he considered to be the most profitable to farmers to grow. But they knew how the Malt Tax interfered with it. If the Malt Tax were repealed, the prices of barley would be

as his pocket was concerned, though whether in the end his higher than those of wheat. As the Solicitor-General said the other day, agriculturists were more unfairly taxed than any industry in the country. He hoped, therefore, that the Solicitor-General would lend them his aid to get that tax repealed, although he did not much think he would. It was said some years ago that the Malt Tax among other things offered an effectual prevention against fraud, and that it secured a good glass of beer of malt and hops. But now beer could be got which had neither malt nor hops. Brewers were allowed to use sugar, and to manufacture malt from maize or any other grain, while if, as the Chancellor of the Exchequer told him, a farmer steeped a bushel of barley in order to sprout it to give it to his horses he was compelled by law to give notice to the nearest exciseman. With regard to taxation, the poor's rates had happily decreased in consequence of the diminution of out-door relief. That was a good sign. The county rates had been lowered in consequence of the very wise legislation of the Government. But there was an increasing burden, the cost of our elementary schools. That was an unfair burden to throw upon the shoulders of the tenant farmer. Voluntary schools could be aided by a voluntary rate or an annual subscription which would amount to something like 3d. in the pound; but the average cost of the Board schools in the parishes throughout England was nearly 4d. in the pound. As gentlemen said in the House of Commons, what was a 4d. rate to him? Why it was a 7½d. Income Tax upon any tenant farmer in the parish. These new rates for special purposes ought, he contended, to be divided between the landlord and the tenant, and that the cost of the school houses should be a charge upon the landlord rather than the tenant. The abolition of turnpikes had involved considerable cost. Rates had increased 6d. in the pound in the villages through which the turnpikes passed, while the roads were worse than before. This affected all who used the roads. Four horses had now to be used where three before served to draw corn to market. A clergyman who kept a trap before he was married and paid 10s. a year for tolls, now paid, though he had no trap, a 6d. rate upon his tithe, which amounted to £3 14s. 6d. a year. Then the sanitary condition of the villages cost a great deal to the ratepayers. The Justices' Clerks Bill would soon increase the county rate, and if the Criminal Jurisdiction Bill of last session became law he was positive that it would also add to the ratepayers' burdens. Every blessed thing was now thrown upon the ratepayers, even to the extirpation of the Colorado beetle, though that insect, if it had come into this district, would have found only rotten potatoes to eat. Two or three years ago an Act was passed for the relief of the ratepayers generally. That Act was for the assessment of woods, game, and mines, which had formerly escaped assessment. In Norfolk the assessment of wood and game amounted to about £50,000 under this new law. But he was astonished to find that in the Blofield Union there had not been a single penny increase—the only Union in Norfolk where the Act had not been put in force. In his neighbourhood game was not more highly preserved than in the Blofield Hundred, and yet the assessment of that neighbourhood had been increased £3,500 from that source. He saw that the assessment of Flegg Hundred had been raised £560 by game, but nothing for plantations (A Voice: "We did that before."). Perhaps that was the case with Blofield; but he did not understand why the Blofield Union did not put this Act into operation. Some manors let for sporting commanded a considerable rent; and there were districts where the tenants would willingly give 1s. an acre for the sporting on their farm. If the 44,000 acres in the Blofield Hundred were assessed at only 6d. an acre, that would give an assessment of something like £1,100. He respectfully urged the attention of the Assessment Committee to this subject. Sir R. Buxton, speaking of the Agricultural Holdings Act, said that he was one of the landlords who did not contract himself out of that Act. Last February Mr. Drace read a paper at the Farmers' Club on the operation of the Act, and he stated that he had received replies from sixteen gentlemen in Norfolk to the effect that their landlords had invariably contracted themselves out of the Act. It did not matter in some counties whether landlords did or did not contract themselves out of the Act, as the tenants, as a rule, much preferred the tenant right which previously existed. In Lincolnshire and some Midland

counties that was the case. But in Norfolk they had no tenant right—no claim to compensation for unexhausted improvements, by any custom of the country. Therefore in that part of the country where they had very few leases it was imperatively necessary for the good cultivation of the land that the Act should be put into operation. He was sorry to think that the landlords had with one voice made an excuse for contracting themselves out of the Act. Parliament had said "There is an Act which we passed, and we say that it is the least protection the tenant should have." He had been told that, generally speaking, it was for the sake of the six months' notice to quit that the landlords had contracted themselves out of the Act. But why did the landlords in Norfolk or anywhere else want that power? Was it right that if a man was to be turned out of his farm he should not have twelve months' notice? What harm could he do to the land in twelve months? How could he alter his course of cropping? It was true that if he had no compensation for unexhausted improvements, he would be a precious fool if during the last winter he spent a large sum in cake and let the landlord take the manure for nothing. But if he had fair compensation, he did not see that he could injure the land in any way, or that it would be to his benefit to do so if the notice was twelve instead of six months. Though, as Sir R. Buxton had said, there had been a great diminution of grouse game in Norfolk during the last few years, there were still some estates where the hares and rabbits were too numerous. He contended that if in times past this could be tolerated, in these days, with the increased expenditure, no man on earth could farm against them. On a farm let at an extreme valuation he had this year seen a large field of barley that was damaged to the extent of £50, and the tenant would not get a sixpence compensation. He had heard of another case in West Norfolk where, on a light land farm, damage was done, it was estimated, to the amount of £360. As sporting rights were increasing in value, it was necessary that every tenant should have some additional protection, because, although the landlord might have a great interest in his tenant, and would not injure him, the hirer of the game did not care a straw for him, and whether he was eaten up or not. Then tenant-farmers must have better farm buildings if they were to graze their cattle successfully in the winter, and to take care of their manure. During the last two winters the loss of manure in Norfolk could not be reckoned at less than £100,000. With the short crops of straw they grew nowadays there was no such thing as keeping cattle decently littered in the open yard. Last year his yards were in such a state that he could not walk into them. He never could get into them except on horseback. The unfortunate man who had to attend the animals did so in jack-boots. He went to his landlady, and told her that he must have a covered yard. Now his was a reasonable rent. Some people would call it a cheap rent, but he did not call any rent particularly cheap at these times. He could not ask her ladyship to spend a lot of money on the buildings without having some income for it; and therefore he said that he must have a covered-in yard in future, and would pay 5 per cent. upon the outlay. Over his yard, sixty feet square, had been put in one span a roof covered with pantiles, estimated to cost £100. Now £5 a year was not much more than the manual value of a ton of decorticated cotton cake, and he expected he should spend twenty tons of cake in that yard during the next winter and summer, while the cattle would be kept warm and dry. He therefore advised them to go to their landlords and ask them to do the same for them. If they pressed them hard they would perhaps do it for them, and not ask them for a percentage. As to covenants and restrictions of crops where they could grow wheat, stubble, barley, why should they be prevented doing so? He could see no reason against such a practice, though he knew that on certain estates there was the most rigid adherence to the four course shift, as if we were now living in the reign of the second George. When he was at Plampstead he had a small experimental fold, where for eight years he grew six crops of corn, one of beans, and one of turnip seed, and he never gave it but one dose of farmyard manure, the rest being artificial, and he left the fold clean and in good heart notwithstanding that severe course of cropping. This year the only two good crops he grew were a crop of winter oats and barley, and both after wheat. Who was to blame generally for adhering to these antiquated customs and these strict covenants? Not the landlord, as a rule, nor the good land agents, but the family lawyer. It was the fami-

lawyer who protested against any improvement in agriculture. If the landlord was induced to give leases, he might say "Don't make them long; make them for eight and not for sixteen years." What did it mean? Why that every eight years there was £20 for a new lease. The landlords were also advised not to deviate from the old course of cropping or the tenants would impoverish the farm; not to build cottages, as they never paid; and not to attend to the new fangled notions about farm-buildings, because they were not requisite. He did not know what was enumerated in the primeval curse which fell upon the ground, but he thought with regard to impediments of modern agriculture there was certainly nothing like the family lawyer. As the law at present stood, what could the landlord do if he had the will? He let a farm to a tenant upon the usual Norfolk covenants. He could eat him up with game without paying him a single sixpence compensation. He could turn him out and half ruin him with a six months' notice to quit. He could confiscate every shilling of his improvements, and as he had the law of distress at his back, he was quite sure of every sixpence of his rent, although the man could only pay 2s. 6d. in the pound to the rest of his creditors. Were these equal laws? Did not they, as tenant farmers, wish to have them mitigated? Was it not a most remarkable thing that those gentlemen who went about the

country advocating the county franchise did not tell the labourer that they wished the franchise to be extended for the purpose of having a Parliament to amend the labour laws—this Parliament had done that—not for the purpose of altering the relations between capital and labour—the present Government had done something in that respect—but that should help the poor tenant-farmers to maintain their rights. It was a remarkable fact that since 1832, when the tenant-farmers of this country were given the franchise and could control the counties, hardly anything had been done to ameliorate their condition. He almost thought that in these times of agricultural distress it was right that they should turn their attention to these matters. It seemed to him that the landlords of this county had different ideas of their duties and their rights. The majority of them were just and benevolent and would do their best to encourage their tenantry; but there were others who did oppress them and who contributed towards keeping agriculture in a state of depression for the want of allowing a little elasticity in one sense and permanency in another. Their ideas of duty were that everything should be left to their own good will, and their ideas of right seemed to be that they should be protected by the most rigorous laws.

PLEURO - PNEUMONIA.

The Irish Cattle Trade Defence Association has, we think, gone out of its way to obtain professional testimony to prove that the flesh of animals affected with Pleuro-pneumonia may, under certain conditions, be used with impunity as human food. This question, *per se*, does not particularly affect the Irish Cattle Trade, which can be defended on very different grounds, and is but a part of one of the most important sanitary problems of the day. The report now before us—of which we here give an abridgment—has been carefully drawn up by three physicians, who are presumably well qualified for the investigation of such a subject, and we gladly bear testimony to the careful accuracy with which they have handled available data, and the strictness with which they have kept within the defined limits of their subject. It will scarcely be of interest to our readers to follow them in their history of Pleuro-pneumonia, which should now be as familiar as household words to all the stock-owners of this country. Similarly the incubatory and definable stages of the disease, and the conditions of its transmissibility, are, in our columns, more than twice-told tales. But the question at issue is not only a very broad one, but it is one of the highest sanitary importance. These gentlemen had to deal solely with that portion of it which relates to Pleuro-pneumonia, and, in passing over well-trodden ground, we fail to see that they have made any discoveries, or thrown fresh light on the postulates we have hitherto been fain to accept in lieu of ascertained facts. First of all we may note that they declare Pleuro-pneumonia to be inoculable. This has for a long time been perfectly understood. Then with respect to the pathological appearances of this disease, they quote Fleming to the effect that "the cellular tissue lying beneath the parietal pleura is rarely involved, so that if the membrane is stripped off the interior of the chest the pectoral walls will appear quite healthy"—that is to say, if the ribs are carefully skinned and rubbed over with a handful of caul fat very few

people outside the trade would be any the wiser. To sum up this part of their subject they confirm the well-attested statements of various careful observers to the effect that the flesh of animals affected with Pleuro-pneumonia, even in an advanced stage, fails to supply any indication of the morbid products of specific disease. To this we can readily assent. We have in Pleuro-pneumonia a purely local disease, highly infectious, though apparently not communicable by mediate contagion, and incapable of being transmitted by inoculation; and the question on which these doctors had to report was whether or not the flesh of animals affected with this purely local disease was fit for human food.

All the practical experiences of this matter which can be resolved into testimony are of a negative character. No evil result has been traced directly to the ingestion of meat from animals affected with Pleuro-pneumonia in respect of the disease itself; but it is very obvious that the later stages of any local disease which attains an intensity sufficient to kill must of necessity produce an emaciation of the tissues of the body, and a vitiation of the secretions which, of itself, is quite sufficient to render the carcase of an animal so suffering innutritious, if not positively deleterious, when used for food. In fact, the flesh of animals affected with Pleuro-pneumonia is not rendered unwholesome by the disease itself, but by the amount of sympathetic fever by which it is accompanied. Thus, in the words of the Report, when the animals are slaughtered "in the early stages of the disease the meat is quite indistinguishable from that of perfectly healthy animals"; whereas, "in later stages the flesh has all the characteristics of imperfect nutrition and wasting." In other words, it presents the appearance which is known to salesmen and meat inspectors as "wet and slippery," which ensures its speedy condemnation. So that, leaving out of consideration the incubatory stage, there may be said to exist, between the first outward and visible sign of Pleuro-pneumonia and the death of the

animal from the disease having run its natural course, an indefinite number of gradations by which the flesh of the animal ceases to be wholesome, and becomes deleterious, though not virulently poisonous. Now, as the doctors are unable to define these gradations, or to draw the line of demarcation at any stage of the disease, we are no wiser than we were before this very careful and accurate Report was drawn, which, if it contains nothing new, certainly does not teach error; and, so far at least as Pleuro-pneumonia is concerned, we have no means of ascertaining whether the flesh of animals slaughtered at any stage of the disease is fit for human food or not, except by its appearance. The scientific part of the question remains *in statu quo*. Nor are we prepared to deal with it. The evidence is negative, and therefore unsatisfactory; but, as far as it goes, that evidence encourages us to go on eating the flesh of animals infected and affected with Pleuro-pneumonia, unless its appearance condemns it. But we would suggest to the Irish Cattle Trade Defence Association that the most satisfactory course of action which they can take, in the interests of consumers, would be to get rid of Pleuro-pneumonia.

This investigation deals with but the fringe of a grave and important subject. That we habitually eat the flesh of diseased animals there can be no reasonable doubt. Whether we suffer by it, and, if so, to what extent, are questions which have not been satisfactorily answered. Our knowledge of this subject is very imperfect, and we have but few trustworthy data to guide us. There are, however, some well-authenticated facts. It has been proved that the flesh of animals which have been suffering from malignant fevers has caused sickness, diarrhoea, febrile symptoms, and death; and it has also been proved that the flesh of such animals may sometimes be eaten with apparent impunity. Trichinised meat has produced the most disastrous results, and the flesh of animals containing tuberculous deposits is capable of transmitting the disease to carnivorous animals. There is no doubt at all about this; but, at the same time, abundant testimony has been adduced to show that this kind of diseased meat has often been used as food without any perceptible evil resulting. The milk of cows affected with Foot-and-Mouth Disease is known to be highly injurious to young animals, and the disease itself is nothing less than an eruptive fever. We can hardly doubt that this diseased milk is deleterious to children, and yet nothing has been proved against either the flesh or the milk of animals affected with Foot-and-Mouth Disease. The germ theory teaches us that febrile diseases are the result of the rapid production and reproduction of minute organisms which multiply themselves like the cells of the yeast plant, causing something analogous to a ferment in the blood. That being so, it would be an outrage on common sense to suppose the flesh of such diseased animals to be wholesome food, in spite of the negative testimony that we eat and drink thereof, yet do not usually die on the morrow. Our immunity from evil consequences when we consume diseased meat appears to rest solely on culinary operations. We must suppose that by boiling our milk and

thoroughly cooking our meat we destroy these germs as we destroy parasites like Trichinae, which, according to Cobbold, succumb to a temperature of 170 to 180 degrees Fahr. But the more we look at this subject in its many bearings, the more sickening does it become; yet, at the same time, no one can give it careful consideration without being gravely impressed with the sanitary importance of making a determined effort to rid the country of the food and health taxes which now burden it under the name of Contagious Cattle Diseases. No one can prove that our health is not impaired and our lives shortened by the systematic consumption of diseased meat, and that many of the ills to which the human race is heir may not be found indirectly to arise from that cause. But as we cannot yet prove that these evils are so produced, and as we cannot afford to throw away anything which appears to be fit for human food, we have no alternative but to get rid of our cattle-diseases in the interests of sanitary science, as well as in those pertaining to agriculture.

Abridgment of the report upon contagious pleuro-pneumonia occurring in cattle, prepared by the direction of the Committee of the Irish Cattle Trade Defence Association, by Rawdon Macnamara, M.D., Alexander Macalister, M.D., and J. Emerson Reynolds, M.D. :—

GENTLEMEN,—In accordance with your instructions we have most carefully investigated the entire question of contagious pleuro-pneumonia occurring in cattle, so far as the propriety of the consumption of their flesh as an article of diet by human beings is concerned, and beg leave to submit for your consideration the following as our joint report. We can assure you that we have approached the consideration of the subject with a grave sense of its importance, feeling it to be a matter of primary social interest to determine, on the one hand, whether such flesh is unsuited for human consumption, and, therefore, regardless of all consequences, to be rigorously condemned; or, on the other hand, whether its use as an article of human food is perfectly harmless, and that its destruction would be attended with no advantage, but, on the contrary, with considerable loss to the community at large. In the remarks which follow we have studied to exclude any form of language which cannot readily be understood by the non-professional reader, as it is to a certain extent for his information that we write; but it is not to be imagined that, because we have so far as possible discarded scientific nomenclature, we have ignored well-based, and now-a-days well-recognised, scientific deductions.

This disease has been long known in Central Europe, whence travelling through Northern Germany, Belgium, and Holland, it at last reached our British shores, where its presence as an epidemic was signalled in 1841. Visiting thenceforward different countries at different dates, its presence at last was notified in America, appearing at Brooklyn in 1843, New Jersey in 1847, and Boston in 1859; whilst our Australian fellow-subjects have to thank us for its introduction amongst them in 1858, it having appeared in that year at Melbourne, and in New South Wales in 1860. In 1864 it made its appearance in New Zealand, and in all of these countries it has ever since been more or less prevalent. We have been thus particular in recording the dates at which this disease has appeared both in America and Australia inasmuch as the common answer, even amongst people who should have known better, to the question, "What guarantee have they, when eating American or Australian beef, that it is not of pleuro pneumonia origin?" is "That the disease is unknown in these countries." Whereas it is now universally acknowledged by all competent authorities that cattle suffer as much in these countries as in the British Isles.

The disease presents itself in two widely different stages, in the first of which the animal seems but to be out of sorts, its condition is unimpaired, and it presents but little, if any,

symptoms of fever. In fact, it would require an experienced eye to detect the difference, whilst living, between such an animal and one in health; what amount of difference is observable after the animal is slaughtered we shall allude to further on, contenting ourselves here with remarking that none such can be observed in the flesh of the animal by the most experienced butcher or the most skilful chemist, microscopist, or pathologist. In the second stage the symptoms during life are far more easily recognised, but the flesh of the slaughtered animal is not distinguishable by any known means from the flesh of any other animal similarly reduced in condition. It is almost unnecessary, however, to add that animals, from any cause, so reduced in condition should not be looked upon as marketable commodities.

As having an important bearing on our subject, it is desirable to say a few words as to the manner in which the disease is propagated amongst herds. There can be little doubt of it but that the disease affects the animal through the respiratory organs, pieces of sponge steeped in the secretion from the nostrils of affected animals introduced into the nostrils of healthy animals having induced in them the disease. Portions of diseased lungs and several pints of the effused serum were administered to healthy cattle, but in no case instance were any symptoms of disease developed. Even the blood of diseased animals has been transfused into healthy cattle, and yet the beasts remained healthy. Experiments also have been made on healthy animals by inoculation, but in no instance has the lung disease been so produced.

The pathological appearances in pleuro-pneumonia are confined to the diseased organs—the lungs. Thus Fleming says (Fleming—"Manual of Veterinary Sanitary Science," 1875," vol. i., p. 195)—"The cellular tissues lying beneath the parietal pleura is rarely involved, so that if this membrane is stripped off the interior of the chest the pectoral walls will appear quite healthy." "Beyond the pathological appearances found in the cavity of the chest there is nothing to indicate in the carcass of an animal which has been affected, even to an extreme degree, that it has suffered from this disease."—(*Ibid.*, p. 444). Gamgee, and all other descriptive veterinarians, agree in this, that except in the lungs no characteristic pathological changes are observable in this disease.

The only appearances which are to be found in other tissues in the early stages of this disease are those which depend on the amount of sympathetic fever present with the local affection, and consist of the marks of a febrile condition. In later stages the flesh has all the characters of imperfect nutrition and wasting; but in many cases, killed in early stages of the disease, the meat is quite indistinguishable from that of perfectly healthy animals. So much is this the case that Mr. Fisher, the City of London Inspector of Meat and Slaughter-houses, says that—"Meat of the meat from animals that have had pulmonary disease is of first-rate quality" (quoted in Dr. Greenhow's Official Report to the Board of Health). Microscopic examination of the flesh of animals which have been killed while suffering from pleuro-pneumonia, even in advanced stages, fails to exhibit any trace of specific morbid condition. In this respect the disease contrasts strongly with the anthracoid conditions, which are attended with marked structural changes.

We may remark, in passing, that sympathetic fever and local inflammation are common results of the injection into the cellular tissues of fluids derived from perfectly healthy animals.

The conclusion from this is plain—the disease is a local one, and, though contagious, yet is limited, as far as its specific nature is concerned, to the lung affected.

There is no case on record wherein the flesh of cattle slaughtered while suffering from pleuro-pneumonia in any stage has ever been proved to give rise to disease in man. Reynal states that the flesh of animals who have suffered from this disease has been in daily use in Paris for the past twenty years without any appreciable results. Loiset states that during nineteen years the flesh of 18,000 diseased animals has been used as food in Lille, and that during that time there were no appreciable alterations in the death rate, nor any unusual accessions of disease.

Dr. Fleming, in his work on "Veterinary Sanitary Science," before quoted, says, in speaking of pleuro-pneumonia:—"Since the malady has been recognised it may safely be asserted that the flesh of millions of diseased animals has been

consumed as food in every part of the world, and yet there is not to my knowledge a single instance of any accident attending or following its use" (page 443).

Mr. Gamgee, in an article which he wrote to denounce the sale or use of diseased meat of any kind, admits "that if a fat bullock or other well-conditioned animal be taken with the disease, it should be slaughtered at once, and the flesh allowed to be sold at a reduced price" ("Edinburgh Veterinary Review," 1862, p. 309).

Many other authorities may be quoted also in the same connection.

From these considerations it is warrantable to conclude that the consumption of the flesh of cattle slaughtered in early stages of pleuro-pneumonia is perfectly harmless, and the destruction of such meat is a wasteful expenditure of a material which is capable of supplying a perfectly wholesome animal food. We have proved that meat of the kind referred to has been largely used in this and other countries, and the fact that not in any one case has disease been traced to the consumption of the flesh of a pleuro-pneumonia animal is a point of the most significant and conclusive value as evidence, more especially as we have precise and positive information relating to the deleterious effects attending the consumption of the flesh of animals affected with anthrax, milbrand, &c., and also the decomposed flesh of healthy cattle. The above remarks apply to the fresh and unchanged meat of animals which have been slaughtered in the earlier period of the second stage of the disease, but we are not prepared to advocate the use of the flesh of animals markedly reduced in condition. There is in the popular mind natural feelings of dislike to contact of any kind with diseased animals, and of aversion to the consumption of their flesh. There is no reason to believe that the fresh and unchanged meat of cattle which have suffered from even advanced pleuro-pneumonia is less nutritive than that of healthy animals. Moreover, we are not aware that it has been even suggested that it is less easy of digestion, and we have been unable to discover any facts which would lead to that conclusion. As regards quality, however, there is a difference, and the evidence for this is that the meat of animals slaughtered in the advanced stage of pleuro-pneumonia does not keep as well as that of healthy animals. We cannot too strongly condemn the practice of selling meat in a putrescent condition.

It is certain, as one of us has stated (see "Manual of Public Health for Ireland," p. 194. See also Christian "On Poisons," p. 625, and Taylor's "Medical Jurisprudence," 1865, p. 281), that the use of the seriously tainted or putrescent meat of healthy and diseased animals alike is attended with danger, and there can be little doubt that effects attributed to the virus of one or other of the diseases to which cattle are liable have frequently been due to a state of insipient decomposition of the food consumed. We may also quote on this point the weighty words of Mr. Simon, the medical officer of the Privy Council, who, in commenting on the subject, says (page 31 of "Fifth Report of the Medical Officer of the Privy Council")—"Sufficient care has not, in my opinion, been taken to separate two important questions—the question of meats being rendered unwholesome by decomposition, and the question of the meats being rendered unwholesome by disease." This statement, which has reference to the meat of healthy animals and of those slaughtered while suffering from any disease, is not less true in 1877 than at the time it was written.

It is true that there are some who prefer tainted to fresh and wholesome meat, and who seem to be protected from the consequences of eating it partly by habit, partly by the culinary art, and in part by a species of dietetic disinfection almost unconsciously practised by persons of epicurean tastes. But these cases notwithstanding, there is no doubt that the general statement just made is true.

It follows, then, from the foregoing that the fresh and unchanged meat of animals slaughtered during an attack of pleuro-pneumonia may be safely consumed; and that such meat is not sensibly less in nutritive value than that of other animals unaffected by any disease, but that it is of lower quality, owing to its greater tendency to undergo change.

It surely requires no argument to prove that the unproductive destruction of large quantities of animal food can be attended with but one result—a considerable rise in the price of meat, which must be paid by the consumer whose means enable him to meet the enhanced cost, and a complete depriva-

tion of a very important article of diet on the part of those whose means render them unable to meet this increased expenditure. Nor is this all. Should, unfortunately, the disease become widespread, and should the fresh and unchanged flesh of pleuro-pneumonic beasts be condemned as an article of human food, a very considerable rise must take place in our rates. The owners of the affected cattle, who have reported them to the authorities, by whose orders they have been destroyed, must, to a certain extent, be recompensed for their loss, whilst the public can receive no return by the sale of the carcase, and it must be the tax-payer who will have to bear all this expense. Of course, if the view happened to be correct that such food is unsuited for human consumption, we could only submit; but as it is incorrect, not only incapable of proof, but absolutely contrary to all recorded experience on the subject, a prodigious expenditure of money would be incurred by the destruction of such food, not only without any advantage, but at a positive and most serious disadvantage. Thus it is that both rich and poor are deeply interested in the correct solution of the question submitted by you for our consideration.

SIR H. SELWIN-IBBETSON ON AGRICULTURAL PROSPECTS.

On Oct. 16 Sir H. Selwyn-Ibbetson, M.P., the Under Home Secretary, presided at an agricultural gathering at Hatfield Broad Oak. He said that at the present moment they could hardly keep their thoughts from the terrible scenes which were being enacted in Bulgaria and Asia Minor. Perhaps no record of history carried down to us anything so dreadful as the sacrifice of life that had been going on during the last few months in those unhappy countries. Turning to domestic topics, he said we heard a great deal in these days about contests between employers and employed. He need scarcely urge the necessity of classes being united and making an effort to help each other along, instead of fighting as to which should get the better of the other. Everything we saw around us showed that it was only by such a combination of classes that we could hope to make agriculture really prosperous. As long as jars and discords went on between labourers and farmers it was impossible that land could be farmed as it ought to be, at a profit. But he maintained, also, that it was not necessary those discords should exist. He believed that, with a very little bringing together of classes, the labourer would see that in bad times such as these the farmer could not possibly increase his rate of wages, but that the farmer would be willing to do so with prosperity coming upon him. He hoped to see the welfare of the labourer promoted by a combination of the landlords throughout the country to give him a better house. With a better cottage let to him, as it ought to be, at a reasonable rent, he would be able to live and labour in hard times like these without striking for an increase of wages. He was satisfied, moreover, that the landlord was very short-sighted who did not see the advantage which he gained by building cheap and sound cottages. Of course it was not as a speculation a pecuniarily remunerative one, but the remuneration came in the thrush and sinews of the labourers and the better cultivation of the land; and the landlord had also the satisfaction of feeling that he was attempting to help others on in their course through life. He had long thought that another thing wanted to encourage the labourer was an extension of savings' banks. The labourer, like everybody else, was too much disposed to let the future take care of itself, and the speaker hoped some day to see savings' banks scattered through all the villages of the country. He was told that they had again another unpropitious harvest, and God knew they had had one or two bad enough. Still, he could not help feeling, after all, that their lot was not perhaps so miserable a one, for he had just come from a country (Scotland) where the hay was not yet gathered and where the corn was green. How those farmers lived he could not conceive, and yet they did live and some of them prospered. Industry, probably, accounted for it. Circumstances had led him to become somewhat of a farmer himself, and, ignorant as he was of the trade, he was yet wise enough to know that it was not a very profitable one; but still he believed sincerely that by putting industry and capital into the land, the land would pay. He, therefore, hoped to see farms increase in size; he hoped to see more

steam cultivation brought to bear upon them, because in these days of scarcity of labour they must resort to steam. He hoped to see a better labourer come out of a sounder cottage, and better labour put into the land; and when those things came, as he was sure they would, surely, though slowly, he believed agriculture would not be the subject of grumbling that it was, at present. Agriculture was the right arm of England, and as such, they were bound one and all to do their best to keep it going. The speaker asked the tenant farmers in particular to remember that they could help the labourer in many ways in the winter months and in illness and distress, and said he should like to see the labourers' children improved by the adoption, to some extent, of industrial training in the national schools, especially with the view of teaching the girls to excel as cooks and housewives. If one class only studied another in such ways as he had indicated we should have no complaints of dissension and discord and each would be helping the other in the great struggle of life.

MR. T. C. BOOTH AND MR. PEASE, M.P., ON CATTLE DISEASE PREVENTION.

The following correspondence has been published in the *York Herald* :—

Dear Mr. Pease,—I was much pleased at reading your remarks on the cattle disease question at Bernard Castle Show last week, for of one thing I am very sure that the more the question is ventilated the more it will appear that it is really a national question, and one affecting equally the producer and consumer of meat. Your letter in last Saturday's *York Herald* appears to take rather a different view of the question than I gather from the report of your speech, and I cannot help thinking that your speech is the more accurate. As you alluded to my evidence, perhaps you will pardon my writing to you rather fully in explanation of my ideas on this subject. As I understood, the following is what took place after the committee had taken evidence :—Sir Selwyn Ibbetson presented his report and Mr. Forster moved to fall back on the report of his committee of 1873. This was negatived. Then coming to Clause 27: The chairman proposed to prohibit imports from Russia, Germany (except Schleswig-Holstein) and Belgium, permitting other countries to send their cattle, subject only to inspection, so long as there was no outbreak in any of them, but giving the Privy Council power to prohibit in case of an outbreak in any of them. As an amendment on this clause, Mr. Norwood proposed that all animals should be slaughtered at port of debarkation, except from America and Canada. Mr. Elliot, then, in order to prevent as far as possible any future importation of cattle-plague, proposed to prohibit Russia, Germany (except Schleswig-Holstein), and Belgium, and to slaughter all animals from other European countries, except store stock, leaving America and Canada free. This was carried by 15 to 8. Subsequently Mr. Forster carried a clause to the effect that previous to any measure affecting foreign cattle being put into force, restrictions under the supervision of the Privy Council must be imposed in order to prevent the spread of disease at home. These two are, I believe, the principal clauses in the report, and I think I am right in stating that you voted for its adoption. My own evidence and I think I may say that of the other witnesses who were asked to give evidence on behalf of the Royal Agricultural Society of England, went to show the desirability of a dead meat trade with all foreign countries (and, as I told Mr. Forster, I should like to see the same carried out at home). That evidence was given with a view not to stop the supplies of foreign meat, and so raise prices on this side, but in order to stop the importation of disease, so that whilst we accepted such restrictions as were necessary for stamping out disease at home we might be safe in future from fresh importations which would spread rapidly through the country. We showed that an inexhaustible supply of cheap meat could be brought from America and Canada, and there was no possible reason why European countries should not adopt the same system. The only answer as regards Europe was the miserable plea—that the meat was too inferior a description to be brought in carcase. From conversation I afterwards had with Professor Brown and others I was

indeed to come to the conclusion that there was no danger of a spread of foot-and-mouth disease or pleuro if the animals were all slaughtered on this side, so that it then became necessary to guard ourselves more particularly against the introduction of cattle plague. That was done by Mr. Elliot's clause, so that whilst I must say that I was glad to see such a clause as Mr. Forster's affecting ourselves put in the report, I think that Mr. Elliot's proposal was the proper course for the committee to adopt as regards European ports. That we are likely to have an enormous increase in the imports of meat and live stock from America there cannot be a doubt. This must lower prices. How are we producers at home to meet a reduction in prices? I should answer, by increasing our own production of meat, and this can only be done by health in our herds. Pass your report into law, and thus with health in our herds, and our increased production of meat, both producer and consumer will be benefited.

Yours very truly,

Wariaby, Oct. 3.

THOS. C. BOOTH.

Dear Mr. Booth,—I am in receipt of your favour of the 3rd, which has reached me here this afternoon. I think you state correctly the proceedings and report of the Committee on Cattle Plague, but I have not the documents by me here to refer to. The point of difference in my view and that of the majority of that committee is this:—They think that that safety from imported disease which we all desire to attain can only be brought about by the slaughter of all imported European live stock, brought in for food, at the port of debarkation, and the absolute prohibition of that from certain other countries. I think that importation from pure countries is perfectly safe, and that for the convenience of the food consumer it ought to be admitted without the obligation of slaughtering at the port of debarkation. I quoted you (I think correctly) as sharing this view, at any rate to a large extent. I look upon this as a most important point. Too stringent regulations will not be supported in the country. Proper regulations will be supported. Our great object is the supply of food to a country that cannot produce sufficient for its own consumption, and it is no small part of that question that the home producer of meat should be placed in a position whereby his breeding, young, and feeding stock should be kept in as perfect freedom from contagion as possible, and his risk of holding as large a stock as possible reduced to a minimum. All this seems to me quite compatible with the introduction of live stock in the manner which I have described. You are quite at liberty to publish this correspondence if you think it will add, as I feel sure your letter will, to the general information on the subject.

Believe me to be, yours faithfully,

J. W. PHASE.

Clunie Cottage, Braemar, Oct. 7th.

THE AGRICULTURAL CONDITION OF INDIA.

It is satisfactory to find that the Government are making efforts to obtain more accurate statistics of the agricultural condition of India. In a country where not merely the welfare of 19-20ths of the population, but also the most important portion of the revenue of the Government, is dependent on the cultivation of the soil, the value of such information can hardly be overrated, and in many of the Provinces there should be no difficulty in compiling it from the official records. Dr. Forbes Watson, whose name is well known for the attention he has for so many years devoted to measures for developing the industrial resources of India, formed a plan for a thorough survey of the country; but, however well it might be adapted for some districts, the difficulties in Bengal are very great owing to the fact that the Government has, by the Permanent Settlement, parted to a great extent with its interest in the cultivation, and there is, consequently, not the same organisation as prevails throughout the villages of the upper Provinces. To set on foot a cadastral survey for Behar and the north of Bengal would involve an expenditure that for the present puts such an idea out of the question, but a plan of selecting certain areas, and obtaining thorough reports from

them, was set on foot by Sir George Campbell, with the view of thereby acquiring data which might be useful in forming conclusions for larger tracts of land, of which the general characteristics appeared to be the same. Sir Richard Temple could form no better scheme than to maintain and extend this system, and it is to be hoped that Mr. Eden will persevere in the same direction. The model farms temporarily established in Bengal were found to be expensive and productive of little good, and they have accordingly been closed, with the exception of one at Poosah, on which it is intended to conduct experiments in tobacco culture. An industrial school which has been opened at Patna may, it is hoped, supply to some extent the want of mechanical education in Behar, and the question of founding an agricultural college is also under consideration, if the Patna school should prove insufficient. At Sydapet, in Madras, a school of agriculture has been established, and the services of competent lecturers have been secured. Apprentices may also be trained at the three model farms in the Bombay Presidency, and materials are being collected at these farms for the preparation and issue of popular manuals on agriculture; but the best part of the work consists in the raising and distribution of selected seed. At Salara, in Soinde, an experiment was tried with native cotton on an acre of land manured and ploughed with an English plough, the result being a yield of no less than 628lbs. of clean cotton. At the Khandesh farm, a *maximus* of 130lbs., and an average of 50lbs. of clean cotton per acre was obtained from Hingunghat seed, but it is doubtful if high farming of this kind will persuade people to enter on a similar course; nor can there be much inducement to do so when we find it recorded as a triumph of success that "for the first time the receipts of this farm very nearly equalled the disbursements." The utility of the experiments, no doubt, consists in the exhibition of the result of using manure on deep ploughing. At Nagpore, for instance, the yield of clean cotton per acre, under the same conditions of season, was 28lbs. on manured land, and more than 50lbs. where manure had been applied; but we are not told what was the cost of the extra labour and manure to be set against an increase of 22lbs. of cleaned cotton per acre.—*Times*.

THE SMITHFIELD CLUB SHOW.

SPECIAL REGULATIONS FOR 1877.

1—"That no animal (cattle, sheep, or pigs) exhibited at any other Show within one month previous to the 1st of December, 1877, be allowed to be exhibited at the Smithfield Club's Show this year."

2—"That each exhibitor be required to certify that an animal to be sent by him for exhibition at the Smithfield Club's Show this year has not been, and will not be, shown at any other exhibition within one month previous to the 1st of December, 1877."

3—"That the exhibitor shall send, with each animal, a certificate that it has not been, for 14 days previous to its leaving home for the Smithfield Club's Show, in contact with any animal suffering from contagious or infectious disease. No animal will be admitted without this certificate."

4—"That all animals undergo a veterinary examination, previous to being admitted at the doors of the Agricultural Hall; and that suitable covering be constructed over the outer yard to enable this to be properly carried out."

The forms of certificates required by Regulations 2 and 3 as above will be sent to all exhibitors in due course attached to the admission orders for their stock. These certificates must be duly filled up and signed.

THE BIRMINGHAM SHORTHORN SHOW.

At a meeting of the Shorthorn Committee of the Birmingham Agricultural Exhibition Society held on the 11th Oct., it was resolved that the next exhibition of pure-bred Shorthorns should be held at Bingley Hall, on Wednesday and Thursday, the 6th and 7th of March next, and that the entries should close on Tuesday, February 12th.

The fine for non-exhibition of animals which have been entered for competition was increased to £3.

The prize list will remain as before, and the amount offered

will be as follows:—Class 1, cows or heifers exceeding three years old, £10 and £5. Class 2, heifers between two and three years old, £10 and £5. Class 3, heifers between one and two years old, £10. Class 4, heifer calves, between six and twelve months old, £5. Class 5, bulls above three years old, £10 and £5. Class 6, bulls between twenty and thirty-six months old, £10 and £5. Class 7, bulls between ten and

twenty months old, £50, £30, and £10. Class 8, bulls between fifteen and twenty months old, £20, £10, and £5. Class 9, bulls between twelve and fifteen months old, £20, £10, and £5. Class 10, bull calves between six and twelve months old, £20, £10, and £5. An extra prize of £20 is offered for the best bull in Classes 7, 8, 9, or 10. All ages are to be calculated to the 1st of March.

AGRICULTURE AND THE MEAT SUPPLY.

A "Tenant Farmer" writes to *The Daily News*: "Your correspondent 'The Other Side' does injustice to the tenant-farmers of this country. Passing by his assertion that we are 'narrow-minded,' &c., which will not hurt us, I should like to say a few words with reference to the statement made in the former part of his letter, viz., that the farmer's tenure is not 'necessarily insecure.' 1. With regard to leases, your correspondent writes: 'The majority of farmers hold their land under leases for various terms of years. . . . The rest under a yearly agreement, whereby either party is entitled to one clear year's notice to quit.' He adds, 'Farmers tell me that in one year they can get out of the land a great part of what they have put in, almost all in two.' I should be glad to know the county in which farmers are so happily situated. From a considerable knowledge of Cambs, Herts, Oxon, and Worcester I affirm that a very large proportion of farmers held their farms under a six months' notice. But if it be true that the majority of farmers hold their land under a one or even a two years' notice, it does not mend matters very much. It is strange that any farmer could have shown so much ignorance as to say that 'a farmer can get out of the land in one year most of what he put into it.' I have just laid out about £150 in draining on a small farm. The drains will probably be as good in 20 years as they are to-day; but I may be ejected at six months' notice and lose the greater part of my money. Probably I should be called a fool for risking my money without security; but I know the land will bear nothing if not drained, whereas if I drain I may get something out of it. 2. With regard to game, your correspondent writes: 'A farmer with his eyes open will always take that factor into consideration in his estimate of the value of a farm.' This is very true, but has 'The Other Side' ever made the calculation about the number of rabbits that may be produced from one couple of old ones in seven years? If he would do this, he would know that a farm may appear free from game when taken, and be devoured by it by the time the tenant is fairly settled. 3. With regard to cropping. There is a senseless provision in a great many leases to prevent a tenant growing two crops of white straw in the same field successively. There is still a more common and more hurtful restriction withholding a tenant from selling hay or straw. The consequence of this latter provision is that on many farms are numerous stacks of hay and straw which the landlord can appropriate at spending price (two-thirds of real value), and sell at market value. 4. With regard to tenants. Your correspondent states they have neither the power nor the will to do their land better, and that they are so narrow-minded withal that you cannot teach them anything. I am not surprised that tenant-farmers should decline to be taught by 'The Other Side,' who is evidently not a practical man. But I do think, sir, that farmers as a class should not be charged with stupidity or lack of enterprise because they are unwilling to spend their hard-earned profits in improvements, the benefit of which they may never reap. It may be true that farmers are not often suddenly ejected at a great loss to themselves, but the power to eject them lies with the landlord, and that power is one which no man ought to possess. It may be true that on some great estates many of the farms are let to the same families for generations, but in these cases the landlord often, to my knowledge, imposes as a condition that he shall have in return not only the tenant's money for rent, but the tenant himself to vote for him, to keep his game for him, to bow to him, and support him in all manner of acts of petty and local oppression."

"An old Farmer" writes:—

Your able article on the decline of tillage farming, of the 8th instant, has greatly interested, though not surprised, me, for I have for some time felt convinced of the fact. I have

come to this conclusion from observation of a district in which I have been interested for the last fifty years, and in which I was a tenant farmer for nearly forty—a district bounded by Mansfield on the south, Doncaster on the north, Retford on the east, and Sheffield on the west—an area containing, perhaps, a small share of first-class grass land, but almost every class of tillage land that is incapable of being converted into useful grass land, but is at the same time capable of almost rivalling the best pasture land in producing food by the application of high class tillage farming. The only question for the tenant farmer is, Will it pay? It is no good for him to produce extra crops or more beef and mutton if, in the long run, he is a loser by the transaction. For several years past he has, in the great majority of cases, failed to make any profit, notwithstanding the high price of meat, milk, and butter. Your correspondent, Mr. Walter Wren, does not seem to think it necessary to show a profit on his farming transactions, but merely shows a large expenditure of capital on a small area of land; but I apprehend a large expenditure of capital must be accompanied by a corresponding increase of income, or else the machine must soon stand still. I have seen many enthusiastic amateur farmers come to grief even when farming their own land, and the difficulties attending tillage farming for the last few years have almost driven the whole class of amateurs from the field as competitors for farms. I believe I am within the mark when I say that the increased cost of production on tillage farms has increased 30 per cent. within the last forty years, notwithstanding the great improve- ments in agricultural machinery, caused by the increase of rents, rates, the value of tillages, and last, though not least, the increase in the value of direct and indirect labour, the almost entire withdrawal of female and child labour from the farm, and, I may say, the withdrawal of a large portion of the rising generation of young men from agricultural pursuits—I do not state this as a complaint, but as a fact that has to do greatly with the diminished growth of food and the increase in the quantity of grass land. I heard a friend of mine say, in speaking of a certain large agricultural village formerly the very garden of the district I am speaking of, "When I left the village about eight years ago there was not a cottage to be had for love or money; when I rode through the other day I counted over forty empty ones." I have known horses standing idle in the busiest seasons. I have seen full-grown men doing the work that used to be easily done by lads from nine to eleven years old. I have known sheep eating turnips on the ground because hands were not to be had to dress and chop the turnips for them—all this on first-class farms. No doubt the farm labourer is quite right in leaving the occupation he has been brought up to if he can better his permanent position in other callings, but the problem is not yet solved. Whether the increased wage he may gain in the town, on the rail, or in the mine is not deceptive when all the pros and cons are fairly weighed has yet to be settled; but it is certain that high class farming must have abundant labour at command if it is to be continued and extended. Necessity has compelled the farmer of late years to cease improvements and to cut down labour at every possible point, but by doing so he has undoubtedly injured the condition of his land. The pleasure of farming for its own sake has fled, from the causes I have endeavoured to point out, coupled with discommodities in cattle and other increased troubles too numerous to state in a letter. The best of the class of farmers are sitting much more loosely on their farms than I have ever known before; the tenant farmer pure and simple, dependent on his farm only, is in a weaker state than I have ever known him. All this, I think, is amply proved by the greatly diminished applications for even good farms under good landlords. The townsman, the manufacturer, say, "give up growing wheat if

It does not pay; grow beef and mutton instead, and we can eat all you can grow." They do not understand that a very large proportion of our land cannot be turned into grass land for grazing purposes. Return Sherwood Forest into pasture, and it would barely maintain Robin Hood and his men; cultivate it on the best known system of farming, and it would supply your Manchester and Sheffield with beef, mutton, wool, wheat, barley, and oats. You, sir, will weary of my long groan, but you must not forget that you first began the groan, so I will end my yarn by enclosing my card.

Mr J. B. Grant, secretary Anti-Game Law League writes:—
Will you permit me to add a word to the letter you have printed on this question? Sad tales of tyranny and suffering come from time to time before our League. Extracts from these would form an interesting addition to this discussion, but they would be too long for a daily paper. The writers tell us they cannot farm against game. The game has eaten them out of doors. Capital and skill are thrown away on a game farm. Not unfrequently they entered with but a small head of game, which was afterwards so increased as to compass their ruin. The young wheat plant is eaten by ground game. If it comes to the ear, hares nip off the sweet stems and trample down the crop. Green crops, so necessary to a large head of stock, are next to impossible near preserves. Rape, taro, carrots, turnips, clover, are destroyed wholesale. Winged game steal the seed corn. In the spring they peck off the young shoots; at harvest time (the preserver may turn down any number of these protected poultry) they eat and spoil without stint, even continuing their raids to the stack-yard. The men who suffer thus have lost all faith in chambers of agriculture, farmers' clubs, and Parliamentary committees.

One unfortunate man who had lost every sixpence, and came to London "to see if he could pick up a crust," told me the other day that the belief was daily gaining ground in his class that the only hope of relief lay in the movement of the labourers! It is pretty generally agreed that three hares eat and destroy as much as will keep a Down sheep. Mr. Clare Read stated some time back (before good farms went a-begging) that 18,000 acres were unlet in Norfolk alone on account of game, and that 40,000 more sheep could be kept in the same county if game were moderately kept down. And what is the attitude of the preserver? "Not a gun can come on my land without my leave. I can preserve all the game I like; can keep a whole regiment of guards, if I choose, to pass over the farm at any time of the day or night. I set traps and a man can get into them if he likes. Whether Jack or Tom occupies the land does not much matter; it is Sir ———'s land. If he had 10,000 acres no power on earth would induce him to let his tenants shoot." That is what a game lessee told a Parliamentary Committee. "The landlord could do what he liked with his own, and he gave up that farm to game. He took no rent, but he let his sheep run across the land. It was a question of agreement between landlord and tenant." That is what a noble lord told a chamber of agriculture. Our game laws put it in the power of the landowner to eat up his tenants, and then we ask, "Why does not the farmer employ more capital?" Our game laws permit the destruction of all green crops, and then we ask, "Why does not the farmer produce more meat?" The land is starved; such crops as it does grow are eaten right and left by rabbits, hares, pheasants, partridges, and the swarm of vermin inevitable to a preserve, and then we ask, "Why is food dear?"

SIR JOHN LUBBOCK, M.P., ON PLANT AND INSECTS.

Sir John Lubbock, M.P., F.R.S., delivered a lecture on Wednesday, the 3rd Oct., in the Albert Hall, under the auspices of the Leeds Mechanics' Institute and Literary Society, on "Some relations between plants and insects." Mr. THOS. DAWSON, president of the Institute, was in the chair.

SIR JOHN LUBBOCK began by remarking on the many differences existing in plants, not only differences of form, size, and colour, but also in other respects, some being hairy, some glutinous, some sticky, &c. These may be accounted for in a great measure by the relations borne by plants to insects, the visits of which are generally necessary to ensure the fertilisation of one flower by pollen from another. In some cases, however, such as that of Drosera, the object of the flower is to attract insects for the purpose of devouring them, and therefore the leaves are covered with sticky hair, which bend gradually forward when an insect alights on the leaf, and squeeze it slowly to death, its juices going to the nourishment of its alluring and deceitful foe. It is easy to see the advantage which flowers gain from securing honey, inasmuch as they are dependent for fertilisation on the visits of bees and other insects, which, while feeding, necessarily dust themselves with pollen, and thus convey it from flower to flower. But it is less easy to understand why honey should be secreted on those parts of flowers where no pollen exists—at the base of the leaf stalks for instance. For the explanation of this we are indebted to Mr. Belt and M. Delgado, who observed that in some cases, upon the stems, and living on this honey, exist colonies of small ants, constituting a most efficient body-guard against the attacks of leaf-cutting ants, who would otherwise strip off every bit of foliage. They also protect plants from the attacks of many other insects, and are in their turn made use of by various small species of aphides who, by secreting a sweet fluid, of which they allow the ants to avail themselves, convert them from enemies into friends, and thereby secure a cordial instead of an angry reception. Harmless, however, and even useful, as are ants, when confining themselves only to the stalks of flowering plants, they would generally be positively injurious to the flowers themselves, as they would merely rob those of their honey, without repaying the debt by carrying the pollen to others. Flowers, therefore, have been driven to protect themselves by various devices, such as shaggy surface, sticky

glands, or hedges of hairs, which entirely prevent the ants from obtaining access to the nectary. For the visits of ants to flowers would not only deprive these of a great portion of their honey, but would almost entirely prevent those visits of insects which are so necessary to secure cross-fertilisation. Any ant occupying for the moment the nectary of a flower, and finding the proboscis of a bee intruding therein, would very naturally seize it between her powerful jaws, and thus, by frightening other winged insects away, would materially interfere with the future prospects of the flower. Various instances of the modes by which ants are excluded from flowers were then given. Take that of the common fox-glove, for example. It is a closed box, within which are the anthers, the pistil, and the honey. It has the specialities of a flower which is adapted for cross-fertilisation by insect agency—colour, honey, and the arrangement of stamens and pistil; but it is closed. At first sight this may appear to be an anomaly and a disadvantage, but the contrary is the case. The flower is adapted for fertilisation by humble bees, and they alone can force open the door. To other insects the box is closed, and thus the flower is protected from robbery. Another interesting case is that of the common Polygonum Amphibium, the beautiful rosy flowers of which are richer in nectar, quite unprotected from the visits of creeping insects, as long as the plant is grown in water. The arrangement of the stamens and pistils is such that the visit of any flying insect cannot fail to ensure cross-fertilisation. When, however, this plant is grown on land, and consequently liable to the visits of creeping things, certain hairs, terminating in sticky glands, are thrown out, effectively barring the entrances of these unwelcome and more than useless guests. The so-called "sleep" of flowers is also another means of self-defence, adopted by those flowers whose fertilisation is dependent upon the visits of day insects; while on the other hand there are other species of flowers adapted for moths and other nocturnal insects, which expand towards night, and scent the evening air with delicious perfume. The curious life-history of Silene Nutans, the "Nottingham catch fly," was then referred to. The advantages of early rising were illustrated by the case of the flower commonly called "John Gotobed at Noon." This flower opens very early, to be ready for the visits of bees, and closes in time to prevent intrusion from ants, which, though certainly not busy animals, are at any rate occupied at home in their domestic

affairs until later in the day, and do not emerge till the dew is off the grass. Passing over the modifications undergone by insects in their structure, owing to their constant search for honey and pollen—such as the lengthening of the proboscis in bees, &c.—Sir John proceeded to discuss the means by which insects, by imitating the appearance of plants, provide themselves with a means of concealment from their enemies. The “walking stick” insect, and many larvae, are instances in point. Instances of caterpillars were cited, in which the creatures, living on the under-side of leaves, not only adapted their colour to those leaves, but actually, as their growth increased, altered the markings upon their bodies so as to coincide with those of the fibres of the leaves. While still quite small the green or brown colour suffices alone to hide them from notice, but their increasing growth demanded still farther protection from the keen sight of birds, &c. Hence these additional imitative markings, rendering their bodies well nigh indistinguishable from the leaves under which they lay. Caterpillars living on low plants frequently descend to the ground, taking a brown colour, while those feeding on large-leaved plants remain there, retaining their green hue. Exceptions there are to this rule, but in such cases peculiar attitudes are adopted by the caterpillars, a *ruse* which succeeds in the same way as does a change of colour, causing them to be mistaken for bits of stick, &c. Curiously enough, bright and striking colours are sometimes adopted as a mode of protection. In these cases, however, they are accompanied by an unpleasant smell and taste, so that the gorgeous dress which would seem so dangerous is in fact a most effectual shield. Some caterpillars protect themselves by looking like small snakes, and have an ingenious way of retracting and swelling themselves up, which increases the resemblance, and scares away their enemies in a most effectual manner. Sir John then pointed out that, as Weissman has shown, from the changes of the caterpillar in its life, we might draw deductions as to the changes which the species had gone through in past ages. The caterpillar of *Chorocampa*, for instance, is at first green, and afterwards striped. Another species of the genus, however, is already striped when it leaves the egg, though we cannot doubt that it, too, was once green when young. Take again the genus *Deilephila Euphorbiæ*. In the first stage it is green; in the second it has black patches and a white line and a row of white dots; in the third the line has disappeared; in the fourth there is a second row of white dots. Now, if we contrast this with other species of the genus we find that some pass their life in a condition more or less resembling the first stage of *D. Euphorbiæ*; others get to the second, but no further; some, again, to the third, and so on. There are five principal types of colouring among caterpillars. Those which live inside wood or leaves, or under-ground, are generally of a uniform pale hue; the small leaf-eating caterpillars are green, like the leaves on which they feed. The other three types may, *si parva licet componere magnis*, be compared with the three types of colouring among cats. There are the ground cats, such as the lion and puma, which are brownish or sand-colour, like the open places they frequent. So also caterpillars which conceal themselves by day at the roots of their food-plant tend, as we have seen, even if originally green, to assume the colour of earth. The spotted or eyed cats, such as the leopard, live among trees, and their peculiar colouring renders them inconspicuous by mimicking the spots of light which penetrate through foliage. Lastly, there are the jungle cats, of which the tiger is the typical species, and which have stripes, rendering them very difficult to see among the brown grass which they frequent. It may, perhaps, be said that this comparison fails because the stripes of tigers are perpendicular, while those of caterpillars are either longitudinal or oblique. This, however, so far from constituting a real difference, confirms the explanation, because in each case the direction of the lines follows those of the foliage. The tiger, which walks horizontally on the ground, has transverse bars; the caterpillar, which clings to the grass in a verticle position, has longitudinal lines; while those who live on large-veined leaves have oblique lines, like the oblique ribs of the leaves. He thought, then, that we were gradually obtaining explanations of many of the characteristics of plants which at first sight might seem accidental or fantastic. Perhaps, however, the researches of eminent naturalists, whose observations he had thus attempted to bring before them, were even more important and interesting from the lines of thought they have opened up in the interesting problems they suggested.

THE SHORTHORN MANIA.

At last there appears some chance that attention will be called to the ridiculous extent to which the competition for certain strains of Shorthorn cattle has been carried of late years in this country and in America. That the desire to raise the stalled ox in the scale of meat producers is in itself most laudable we should be the first to admit; and growers of first-rate beef may accept beforehand the assurance of our very highest consideration. Nowhere, they may rely upon it, is an extra touch of juiciness in the well-fed ramp-steak, nowhere is the melting tenderness of the judiciously kept (and roasted) sirloin; more keenly appreciated than in this metropolis. In judgment as to the texture of the undercut we yield to none. If higher works of art in this line are yet to be tabled, they may at least reckon upon being treated with the most delicate discrimination. But when what was once a useful endeavour to improve the quality of a most important article of food degenerates into a competition between men of the wealthy lower orders as to which shall own the highest-priced heifer of the most “fashionable” blood, then we may venture to point out that this foolish rivalry only recalls the fancies that from time to time have in all countries afflicted people with more money than wit. Here is the tulip mania, the corkscrew-tailed-pug mania, and a variety of other manias making their appearance in a new shape. The hobby is, no doubt, harmless, and better certainly than gambling on the turf or risking health and inheritance at Crockford’s; but still nothing which entitles those who ride it to so absurd a length to imagine themselves benefactors of the country. Yet, strange as it may seem, the worthy people who are troubled with this delusion think to have the credit, not only of long pockets but of long heads, with a sort of additional odour of humanitarian benevolence to cling to them into the bargain. That there are shrewd men among the purchasers is quite possible. It may answer very well from some points of view to fall in with the prevailing craze, and the wiser heads may trust to their sagacity to “get out” before the crash comes. While it lasts, nevertheless, the mania is interesting. The prices of one or two favourite breeds are constantly rising. Heifers at 4,000 guineas apiece are now not uncommon. The other day a noble lord fell so completely in love with one of these delicate creatures that he jumped from 3,300 guineas to 4,300 guineas at one bid. This proof of spirit was received with the wildest enthusiasm. The “points” of this animal were doubtless superb. Still, this is clearly “plunging” in the paddock instead of “plunging” on the turf. And we may recall the fact that among racehorses high-priced yearlings are not usually very profitable to their enthusiastic owners, and are, moreover, rarely chosen to breed from. A trainer can find out what a thoroughbred two-year-old is made of very soon; but over what sort of course can a breeder try his 4,000 guineas heifer? Already this breeding in-and-in has produced an extreme delicacy among the progeny and perhaps something worse. The theory is that these highly bred, delicately nurtured pedigree cattle serve, when carefully distributed, to raise the general character of the beasts on large farms, ranches, or ranches in Europe, America, or Australia. But the question is whether the mania is not defeating this object, whether the excessive delicacy spoken of does not affect their usefulness in this direction. On this point we do not presume to enter, nor certainly to decide between the partisans of the “Bates” and the “Booth” cattle. It is sufficient to note, for the guidance of the unwary, that a very short time ago some unlucky “unfashionable” cattle, formerly reputed to be quite equal to their now modish competitors, and generally admitted still to carry as good beef, were sold at an average of 2.5 a head. They had their day like the “accursed” Blacklock blood on the turf; and now they are comparatively neglected, though probably with nothing like such good reason. The time may not be far distant, therefore, when Duchesses of Geneva, Dukes of Hillhurst, &c., will likewise descend to the proper level; and emotional bidders will awaken to the fact that the “Shorthorn mania,” like other bubbles, leaves a very small percentage of profit when it bursts.—*Pall Mall Gazette*.

GRASS v. ARABLE LAND.

"As fat as a grass farmer."—*Old Saying.*
 "More grass less beef."—*Full Mall Gazette.*

According to Lord Salisbury, "Statistics in this country is a very advanced science." This statement is certainly not correct as regards agricultural statistics, for not only are the annual returns not to be depended on, as each occupier pleases himself whether he makes a return or not, but the deductions which are drawn from these returns are arbitrary and unreasonable. It seems to be assumed all round that because the number of live stock is less, by consequence the production of beef and mutton is less also. We might as well argue that because the number of fleeces of wool in the hands of staplers and farmers is greater than usual, consequently more woollen articles are being manufactured. It would be safer to assume that the number of store live stock is somewhat less because, in consequence of the high price of meat, the raw material is being more quickly manufactured into beef and mutton. As a matter of fact, beasts and sheep are made fat and slaughtered at a much earlier age than formerly. Some dozen years since some of our would-be philosophers, who think that farmers never know their own business, tried to put pressure on Government to pass an Act of Parliament prohibiting the slaughter of calves and lambs on the plea that consequently the supply of meat would be greater. It is a fact that arable land is being rapidly converted into pasture, and *The Times* gives the reason in one line, "it no longer pays to plough and it pays to graze." Doubtless, this change must be regretted if the assertion of a writer in *The Pall Mall* be correct, "More grass less beef." It is correct in this limited sense only—that during the time, say, from six to ten years, whilst the young grasses are establishing themselves on the new turf, the productive power of the land is less than when under the plough. The element of time seems under any treatment to be indispensable in the conversion of arable land into permanent pasture. It is the tediousness of the process quite as much as the expense that prevents the practice from being more general. Is this change, which is on all hands granted to be a growing one, to be regretted? If it can be shown that the landowner, the occupier, and the consumer are all benefited by it, surely not. The landowner is undoubtedly. Mr. Caird says that a meadow on one side a hedge may be let at 60s. per acre, whereas an arable field on the other side of the hedge will fetch but 15s. per acre. My own experience says that in the long run the occupier is benefited. The farm which I now hold is about 240 acres. In 1866, when my occupation commenced, one-half was arable. Now a little more than one-sixth is under the plough, the difference between one-half and one-sixth—over 70 acres—being turf of various ages. A considerable proportion of the 70 acres whilst under plough not only did not pay but earned a loss of more than its rent and taxes. All that is changed. Now as to the assertion "more grass less beef," which I take to be the consumer's side of the question. These are the gross totals of the undermentioned products sold during three different years from Lady-day to Lady-day.

	1858-59.	1863-64.	1875-76.
	£ s. d.	£ s. d.	£ s. d.
Cheese	429 7 8	416 1 9	545 4 7
Sheep	153 8 0	142 0 0	555 8 2
Pigs	166 2 10	107 9 2	450 0 0
Butter and eggs..	52 13 10½	40 7 7½	110 14 0½
Beef	0 0 0	86 0 0	328 11 0
	801 10 11½	741 18 6½	1989 13 9½

And what has the agricultural labourer to say as far as regards his interest?—"That the wages of men employed in husbandry are better and their condition more satisfactory where there is much grass land than where there is little." Very likely fewer hands will, on the whole, be employed as ploughing decreases and grass increases. But the reduction of unremunerative labour is not a matter of regret.

It has been well said that the productive power of the land of this country may be doubled. If this be true of badly-farmed arable land, it is still more true as regards badly-farmed grass land. The beef and mutton, which pay the producer best, and which the consumer most wants, are made during the summer months. It is no longer necessary in order to keep up the fertility of a farm to make a large quantity of manure in sheds and yards from feeding beasts in order that

such manure may keep the land up to the mark. Feeding-stuffs consumed on the grass during the spring and summer not only make a better return, but keep up the condition of the land at a less expense than when consumed in yards and stalls. And the market of the world is open to farmers for feeding-stuffs, which they can buy much more economically than they can produce. During this last summer Egyptian cotton-cake of good quality was brought on the farm at a less cost per ton than the price paid for wheat-straw fetched from the premises.

One of the reasons assigned for the fact that arable is being converted into grass land is that the improving tenant is better protected against the rapacious landlord when his occupation is grass than when it is arable. I am not going to argue this question on the natural enemy principle. Let us leave that line to those who have originated it—our philosophic politicians. The interest of the tenant is not better protected whilst his land is being converted than whilst it is in plough. Farmers know, though philosophers may not know, that such conversion is not instant, but is of slow and gradual growth, and subject to repeated backslidings. The only protection against confiscation that the tenant has is the power to plough up—the power of the whip. Where landlord and tenant share the expense of laying down, such expense is a heavy drain on both, and is equal to from two to six years' rent, according to the nature and condition of the land and the efficiency of the job.

Another reason given for the change is that less capital is required for the management of grass than arable land. We all know that too often less capital is invested on both grass and plough land than is conducive to full production. There is farming—and farming. On comparison, I believe good farming, that which gives a liberal product and also pays—no farming is good that doesn't pay—requires more capital where the occupation is principally grass than where it is principally arable. As far as my experience goes, grass land has more capital invested on it, and also the occupiers who are converting arable into grass are men of capital in comparison with the occupiers who are content to plough on. After all, capital controlled by intelligence will only be permanently directed to a paying concern. It is of no use applying other than sound commercial principles to money investments, even in farming. The question becomes much wider when the laws of entail, of transfer, and of tenant-right are brought in. But things being as they are—and they might be much worse—this remains: "It no longer pays to plough and it pays to graze."—T. CARRINGTON SMITH, in *Staffordshire Advertiser*.

ON THE VITALITY OF WHEAT.

The period during which our cereals may retain their reproductive power is uncertain, and is doubtless subject to the conditions under which they are harvested and kept. The case of the Egyptian Mummy wheat would go far to prove the retention of vitality to an almost indefinite space. And although not many men like to sow old wheat, there are farmers, here and there, who use it for their early-sown fallows. Nor can we think they are far wrong. It may be longer in the earth, but its vegetative powers are not diminished. Far better, we would say, to do so than to plant the yield of a bad harvest—far better than to say, as some do say, "Oh! this won't do for the miller; let us sow it." If it is true that as we sow so we shall reap, this is a penny wise and a pound foolish policy. Yet last spring we had samples of "seed" barley offered to us which when tested only gave 46 per cent. of fairly healthy shoots.

The Royal Agricultural Society of England has recently made a move in the right direction, in placing among its members botanical privileges, one to the effect that a sample of seed corn may be tested for its germinative power and purity of sort, for a fee of five shillings. In order to test its value we lately sent up a couple of samples which were respectively marked "H" and "S." The former was of this season's crop, grown by a well-known member of the Council of the Society—Mr. C. Howard—and of which stock we were at the time sending parcels to various counties. The report reads thus:—

"Sample H."—This is a good, well-grown, and equal-sized grain. A small number of the grains (3 per cent.) had begun

to germinate, and had been arrested. The embryo or minute seed plant, having pushed its way through the seed coverings, was more liable to perish, but it was yet healthy, and all the seeds now referred to grew. Niney-eight per cent. of the grains germinated. The remaining 2 per cent. failed to grow because the embryo was decayed."

The next sample was, unknown to the Consulting Botanist, Mr. Carruthers—of 1876 growth, and this is what he says:—

"Sample S." "This contained a large proportion (10 per cent.) of small unripe grains, which, however, germinated, though the plants produced by them would be feeble, at least in the early period of their life. Twelve per cent. of the seeds were so broken and injured as to be incapable of germination. Eighty-eight per cent. of the full-sized seed grew. The twelve per cent. that failed to germinate contained dead embryos. This sample is certainly an unsatisfactory sample of grain, and its imperfect condition is due, I believe, to bad harvesting and bad thrashing." (Signed.)

W. CARRUTHERS.

Oct. 6, 1877.

We know, from independent methods of testing, that both reports were to the last degree accurate. Only one thing to find fault with—the long time which elapsed ere the returns were received. Why in our case the one lot (that we were selling for seed) was moved off long before we heard the result, while in the other it was no use to us whatsoever. Those who are interested in such matters will find a ready and certain method in the following formula (which please clip out and make use of):—Draw 100 grains promiscuously, lay them in two pieces of thick flannel well saturated with rain water, place it in a warm temperature, keep it wet, and in 50 or 60 hours you will find it sprouted. The general adoption of such a handy method would give a certainty to what a farmer was actually sowing. Thus, if he found the germinative percentage low he must add more seed to make up for the deficiency. The subject is one that is worthy of the greatest attention.—From T. Bowick and Co's Price Current.

GOOD ADVICE TO LABOURERS.

At a public meeting held under the auspices of the National Agricultural Labourers' Union at Rivenhall, on the 17th Oct., Mr. R. W. DIXON, a farmer, and landowner, took the chair, and made the following sensible speech, which we extract from *The Chelmsford Chronicle*:—

Friends, I am here because I have a sincere wish to be of use to you if possible, and because in your objects of self-improvement I have the fullest sympathy. There are two reasons which make me hesitate as to the propriety of presiding at your meeting to-night—the one that I feel I do not sufficiently understand all the questions that are to be touched upon, and the other that I differ altogether from the Union on some questions it has hitherto insisted upon. On these differences I will touch shortly by and by—possibly you and I may more nearly agree on these differences than I think. But I am here to-night because I have a sincere wish to help you if I am able to do so. I take it that you are interested in the Union because you believe it will help you to get better incomes—i. e., higher wages. Well, I cannot object to your seeking that—it is quite right, and you would be to blame if you left unused any opportunity of increasing your wages. This brings me to touch, as I said, upon our probable differences. The Union was first formed that agricultural labourers might, by clubbing together in the Union, raise the rate of wages. If you mean by this that your secretaries are to obtain trustworthy information as to the rate of wages paid throughout our county and country and the world, and keep all the members of the Union informed on this matter, that is right and will be useful, for you will know where and in what districts labourers are scarce, and you would no doubt draft off from the full neighbourhoods to those scantily supplied; for where labourers are scarce there will be higher wages, where labourers are plentiful there will be the lower rate of wages. By this action you will ease the full lower-priced district and at the same time lower the scarce higher-priced district—perfectly

right and sensible. Such information, if it also treats of the expenses incurred in living in those other districts, and of the conveniences and inconveniences of living there, will enable each to choose for himself the place where, putting all things together, he prefers to sell his labour. But if you wish, by putting your heads together, arbitrarily (i. e., without any other reason except that you like it) to raise the rate of wages, then you will fail of your object. Let me illustrate what I mean. Suppose you, all over the country, join the Union, and agree together that you will no longer accept 14s. a week, but that you will stand out for 30s., and that not a man will put his hand to work under that sum. What would happen? Farmers would do some of the work themselves—would have undone what could not be done, and would look out for other sorts of labourers, e. g., some of shoemakers, coal-heavers, porters, railway people; and a host of others would say to themselves we will come and fill these places. Farmers would not get their work done so well at first, and would perhaps pay 15s. or 16s. for it, but the lads would grow into their new occupation just as you yourselves have done. By and by the Union would feel the tremendous strain put upon its resources, you would be finding out your mistake, many would be returning to their work; what with your returning and the fresh hands employed there would be a glut in the labour market, and instead of getting 30s. you would probably get 12s., and for awhile less than that. It is impossible to raise the rate of wages, at least for long together, unless you can bring it about by some natural cause, such as emigration, turning to other trades, or by getting farmers to see how they can by expending 14s. extra obtain thereby 14s. 1d. Then, again, I believe some of the speeches of the Union advocates have been not only wrong (I mean mistaken) but have been very intemperate, and therefore mischievous. They have endeavoured to frighten the farmer into paying more wages than the state of the labour market allowed. This has given rise to much bitterness. Farmers have felt that while there are cases of unjust dealing with labourers, they are not fairly chargeable as a class with this indictment, and resent it. Thus in many places great bitterness has sprung up with ill-feeling between class and class. From all this I wholly dissent and on no account would I help in any way to support any Society that I felt was doing such harm, harm even to those it intended to help. But to-night you are met under the auspices of the Union for the purposes of mutual improvement. You want to obtain some alteration on the statute book. You want the franchise and to take a part in the government of this empire. You want some laws removed or altered. You all feel the want of understanding these laws more fully that you may be sure you are wise in seeking their abolition or alteration, and I am fully with you. I know that the Union, if it uses the right means, can aid you materially in raising your position and bettering it. If it helps you to govern yourselves—to be temperate in all things—if it helps to make the drunkard sober—the passionate calm—the thoughtless thoughtful—the spendthrift frugal—then you will be better workmen—you will command better wages, and compel the sincere respect of all about you, and the confidence and esteem of your employers, who will value you accordingly.

Mr. DICKENS, a special delegate, after congratulating the Chairman on the outspoken tone of his speech, said that his presence among them was a step in the right direction. He expounded at great length the programme of the Union, and his remarks were frequently cheered.

Mr. JAMES MOXEN, district secretary, followed.

A hearty vote of thanks was, on the proposition of Mr. SHELLY, seconded by Mr. BRADY (Kelvedon), accorded to the Chairman.

BAD HOEING.—At the Dorchester County Court on Thursday Oct. 25, Mr. Lefroy, judge, had before him the case of *Homer v. Pearcoy*, the plaintiff, for whom Mr. Pope appeared, being a large farmer of Athelhampton, and the defendant, a labourer, who was represented by Mr. Weston. £3 15s. was claimed for damages sustained by the bad hoeing of manure on plaintiff's farm, and the damages were made out, but His Honour suggested Mr. Homer should have taken care to avoid employing an incompetent labourer, and therefore gave judgment for nominal damages, 10s. only.

REVIEW OF THE CATTLE TRADE DURING THE PAST MONTH.

The Cattle Trade during the past month has been characterized by quietness. Supplies both of Beasts and Sheep at Islington were short, but supplemented by comparatively large arrivals at Deptford, they proved quite equal to the demand. The receipts of Beasts from our own grazing districts were not so heavy as last year, but the quality and condition were mostly satisfactory. The Scotch arrivals were few in number, but of good quality. From Ireland there was a fair show. Amongst the foreign importations was a moderate sprinkling of American, with some Spanish and Danish. The Tonnaing stock was retained at Deptford. Not much life was observed in the trade at any time during the past month. Fine breeds, however, were well held. In other respects not much was done, and quotations were more or less irregular. The top price has remained tolerably steady at 6s. per 8lb.

As regards Sheep there was a fair supply on offer, and foreign imports were again large. The trade was much the same as with Beasts. Fine breeds commanded some attention, and reached high prices, the best Downs and half-breeds making 6s. 10d. and 7s. per 8lb. Otherwise the market was unsettled.

Calves were quiet but tolerably steady. Pigs sold slowly

The following shows the import of foreign stock into London during October:—

	Head.
Beasts	9,649
Sheep	58,817
Calves	1,028
Pigs	748

COMPARISON OF IMPORTS.

	BEASTS.	SHEEP.	CALVES.	Pigs.
1876	20,663	56,086	1,793	1,165
1875	14,687	67,843	1,648	1,894
1874	12,913	48,769	1,994	3,038
1873	12,987	48,490	2,465	3,465
1872	11,694	47,906	916	820
1871	13,606	47,933	1,532	2,660
1870	16,598	42,584	3,035	3,370
1869	11,498	28,282	2,365	1,902
1868	12,744	17,891	983	1,943
1867	13,061	39,265	957	2,911
1866	15,875	30,108	1,678	4,859
1865	16,344	69,611	1,952	9,135
1864	16,074	38,175	3,339	5,537
1863	11,563	37,621	1,129	2,965
1862	7,906	28,109	1,327	1,600
1861	5,567	42,538	1,207	5,315
1860	6,760	24,980	1,462	2,074
1859	6,026	24,323	784	878
1858	4,600	24,145	1,581	558

The arrival of Beasts from our own grazing districts, as well as from Scotland and Ireland, thus compare with the four previous years:

	Oct. 1873.	Oct. 1874.	Oct. 1875.	Oct. 1876.	Oct. 1877.
From Lincolnshire, Leicestershire, and Northamptonshire.	11,520	8,540	9,950	9,405	8,400
Other parts of Eng- land, including Nor- folk and Suffolk.	4,720	1,800	1,830	1,695	1,740
Scotland	14	469	136	320	264
Ireland	1,000	2,000	1,800	3,100	2,200

The total supplies of stock exhibited and sold during the month in the Metropolitan Cattle Market have been as under:

Beasts	14,690
Sheep	58,990
Calves	670
Pigs	100

COMPARISON OF SUPPLIES.

	BEASTS.	SHEEP.	CALVES.	Pigs.
1876	29,405	112,220	4,405	190
1875	27,460	113,880	1,740	330
1874	27,170	111,240	2,945	480
1873	33,970	112,910	3,450	1,480
1872	22,908	115,000	1,560	1,000
1871	23,415	116,330	2,011	970
1870	23,290	130,820	2,955	1,995
1869	23,840	86,930	2,375	830
1868	26,562	109,160	1,446	1,380
1867	28,340	103,870	1,129	2,865
1866	27,060	99,200	1,666	4,340
1865	30,210	157,840	2,932	2,478
1864	33,840	137,454	2,671	3,830
1863	30,612	110,100	2,029	3,439
1862	28,975	118,870	1,855	3,286
1861	23,220	121,890	1,636	3,650
1860	26,240	128,250	2,289	2,620

Beasts have sold at from 4s. 6d. to 6s. 0d.; sheep, 5s. 6d. to 7s.; calves, 4s. 6d. to 6s. 2d.; and pigs, 4s. to 4s. 10d. per 8 lb., sinking the offal.

COMPARISON OF PRICES.

	Oct. 1873.	Oct. 1874.
	s. d. s. d.	s. d. s. d.
Beef from	4 4 to 6 4	4 0 to 6 4
Mutton	4 4 to 7 0	4 6 to 6 10
Veal	4 4 to 6 2	4 8 to 5 10
Pork	4 6 to 5 8	4 4 to 5 4
	Oct. 1875.	Oct. 1876.
Beef from	4 0 to 6 4	3 2 to 6 4
Mutton	4 6 to 7 6	5 0 to 7 4
Veal	4 6 to 6 8	4 6 to 6 8
Pigs	4 6 to 5 4	4 6 to 5 8

GAINSBORO' FAIR.—Business began on Oct. 23, when a very fair quantity of cheese was pitched, and a fair trade was done, the best sorts fetching from 80s. to 85s. per cwt., and medium and common qualities from 60s. to 70s. The cattle fair was held on Wednesday. Trinity-street was several inches deep in mud and filth. A large quantity of beasts were shown, but trade was very slow, and many droves returned home unsold. Bullocks were very numerous: two-year-olds fetched from £15 to £18, and younger ones from £10 to £12. There were few fat beasts, and they realised from 9s. to 9s. 6d. per stone. Cows with calves sold at from £24 to £26, and heifers from £16 to £18. There was a capital show of sheep: few sales were effected. Quotations: gimmers 50s. to 66s., ewes 48s. to 58s., and lambs from 30s. to 45s. A very good pen of the latter, numbering 100, was sold at 40s. each. The horses were considerably above the average; in fact, a better lot has seldom been seen at Gainsboro' fair. Foals from £20 to £50. Supply of ponies more than satisfied the demand, and many remained unsold. A small drove of rough-coated Russian ponies engrossed some attention of buyers. The mart yard was more than usually attractive to pleasure-seekers, of whom there was more than an average number.

WELLOW SHEEP FAIR (October 24).—There was a large supply of sheep, the total reaching about 6,000. The attendance was numerous, and some of the first buyers in the country were present. Wellow fair has always been noted for good sheep and high prices, but so far as the latter part of the above reputation is concerned it was not maintained. Prices went down considerably, and, as a general rule, averaged from 3s. to 5s. per head below Kingsdown and Wilton. Sheep of the finest quality sold well, but those of ordinary value hung on the hands of sellers. On the whole the trade was slow, and the prices had a decidedly downward tendency.

WINCHESTER SHEEP FAIR (Oct. 23).—This fair, held to-day, was the largest known for years, and the condition of the sheep on offer was good. Trade was not brisk, about a fourth of the supply remaining unsold. Ewes and wether sheep were from 3s. to 4s., and lambs from 2s. to 3s. below Weyhill. There was a good show of prize lambs. The prize of £35 for the best pen of 100 Down wether lambs bred and fed by the exhibitor, and dropped after the 1st of January last, was taken by Mr. E. Bailey; second, £20, Mr. C. Waters, Stratford, Salisbury; third, £15, Mr. Stratton, Chilcombe; fourth, £5, Mr. Lyne, Compton.

REVIEW OF THE CORN TRADE,

FROM THE MARK LANE EXPRESS FOR THE WEEK ENDING OCTOBER 29.

Unsettled weather has prevailed throughout the country during the past week, but the intermittent rainfall has been of service to the farmers in enabling them to plough the stubbles, and during the intervals of sunshine good progress has been made with the sowing of winter wheat. Considering that the year is now well advanced the temperature has been mild, and the usual agricultural operations of the season have been carried on in a fairly satisfactory manner. The heavy snowfall which has occurred in the North of Scotland has entirely prevented ripening of the outstanding crops, which have been cut in a green state to furnish food for the cattle, and what with the failure in the crop of potatoes and turnips, and the unsatisfactory result of the thrashing of cereals, the present season has been unusually disastrous to the Highland agriculturists. A good deal of English Wheat has been thrashed out lately with results which, while confirming the general shortness of this year's crop, scarcely bear out the unusually low estimate of 9,500,000 qrs., at which the yield was recently estimated by certain agricultural authorities. For all practical purposes our own computation of 11,000,000 qrs., made in the middle of August last, may be taken as substantially correct. Taking the annual requirements of the country at 23,500,000 qrs., we must still be indebted to foreign importations to the extent of some 12 or 13 million qrs. between this and 31st. August 1878, as reserves of old wheat in farmers' hands at the commencement of harvest were quite insignificant. Were it possible that the stream of importation could flow on unchecked at the rate it has been doing lately, just grounds might be found for anticipating a glut of wheat, but it must be remembered that the present time is the heaviest in the whole year, as far as imports are concerned, owing to the large outward movement which takes place during autumn from ports which are ice-bound in winter. That our future requirements will be met there is no room to doubt, considering the quantity and quality of the American crop, and the reins of prices will be doubtless in a large measure in the hands of that country; but as we have before remarked, it is difficult to foresee any material alteration in the present range of values, as, even if a fall of 5s. per qr. took place, it is by no means unlikely that America would ship maize, of which she has plenty, in place of wheat, and prices would so re-adjust themselves under lighter imports and increased winter consumption. The weak point in the trade is beginning to show itself in Indian produce, which still reaches us in considerable quantities, and now that America has resumed her old supremacy in the van of the nations to whom we look for wheat, India becomes, as it were, an extra source of supply without a corresponding outlet. Millers, too, for the moment, appear to have lost something of their old predilection for this class of grain, and as holders do not seem inclined to give way, transactions have recently been the reverse of extensive. Not that, with our large supplies overweighting the market, and the general slackness of the country demand, trade has been active in any description of wheat, but the recent decline of 1s. per qr. has been chiefly felt upon Calcutta and American produce. In contrast to the large arrivals of wheat into London the supply of maize has been for some time small, and a sharp upward movement has been going on in prices for both round and flat corn in all positions, 30s. 8d. having been paid for mixed American for November-December

shipment. The spot trade has been equally strong, and corn which a month ago could have been bought for 27s. is now easily saleable at 30s. ex granary. Barley has also been steady, but less active than maize, and an upward tendency is observable in prices. The number of arrived cargoes of wheat at ports of call has been steadily increasing during the past week, and with a moderate demand prices have receded about 1s. per qr. Maize has again advanced 6d. per qr. in all positions, and barley remains steady. The sales of English wheat noted last week were 51,995 qrs., at 52s. 9d., against 48,271 qrs., at 46s. 9d. in the previous year. The London averages were 58s. 5d. on 2,003 qrs. The imports into the kingdom for the week ending October 20th were 1,113,422 cwt. wheat, and 118,415 cwt. flour. Considering the depression apparent in the trade throughout the preceding Friday, the tone of the market on Monday last was decidedly stronger than was anticipated, and although business was not very brisk, wheat buyers threw aside some portion of their reserve, and bought to satisfy their immediate requirements somewhat more freely. The week's arrivals of home-grown wheat amounted to 5,002 qrs., and the supply fresh up on factor's stands was again small, and varied in quality. The few exceptionally fine samples of white were cleared off at former prices, but inferior lots were unsaleable, and the bulk of the offerings could only be moved at a decline of 1s. per qr. on the week. Wheat from abroad was also again in liberal supply, the week's imports reaching nearly 68,000 qrs. For the first time for many months America showed foremost among the contributing countries, the arrivals from the United States and Canada being rather over 31,500 qrs., India and North Russia were represented by 12,500 qrs. and 11,500 qrs. respectively, while Germany and New Zealand furnished the remainder. The week's exports were 4,459 qrs., showing a decrease of 1,574 qrs. on those of the previous week. There was a fair attendance of millers, and a steady consumptive demand was experienced at a decline of about 1s. per qr., the depression being chiefly noticeable upon Indian descriptions and inferior qualities generally. The supply of barley consisted of 4,213 qrs. of home-grown, and 15,519 qrs. of foreign. Both malting and grinding descriptions were firmly held, and there was a fair inquiry for both at former currencies. The imports of maize were small, only 9,550 qrs. being reported from America. A smart advance took place in value, and with an active demand sales were readily effected at an improvement of fully 1s. per quarter on round corn, and 9d. per qr. on mixed American. The arrivals of oats amounted to 26,369 qrs., a more moderate importation than for some time past, and the trade ruled quiet but steady prices being occasionally the turn in sellers' favour. On Wednesday there were 420 qrs. of English wheat, and 51,260 qrs. of foreign. The market was thinly attended, and of the usual quiet mid-week character, but wheat was no cheaper to sell, while oats and maize were both the turn against buyers. On Friday the return showed 590 qrs. of English wheat, and 64,400 qrs. of foreign. There was a quiet trade for wheat, at a decline of 6d. to 1s. per qr., on American sorts since Monday. Maize was very firm, and oats 6d. per qr. dearer on the week. The imports of flour into the United Kingdom for the week ending October 20th were 118,415 cwt., against 115,726 cwt. in the previous week. The receipts were 18,614 sacks of English, and 3,656 sacks

and 13,945 barrels of American. Business has ruled slow, and both sacks and barrels have been the turn cheaper to sell. The week's imports of beans were 73,138 cwts. and of peas 40,914 cwts., showing an increase of 7,735 cwts. on the former, and 8,101 cwts. on the latter. Neither article has met with much attention of late, and beans have declined 1s. per qr., while peas remain nominally unaltered. The deliveries of malt were 13,349 qrs., and the exports 742 qrs. There is now a fair quantity of new on offer, but no quotable change in value has taken place for either new or old, although holders have shown some disposition to quit the latter. Very little alteration has been noticeable in the agricultural seed trade during the past week and with the exception of trefoil, in which a fair amount of business has been done at an advance of 1s. to 2s. per qr., prices remain about the same for all articles. New English red clover has not yet made its appearance, and with large prospective supplies from the Continent and America, operations in this article have moved within the narrowest limits. White clover being cheap, has attracted more attention, and fine Ripe is fully as dear, but other seeds have sold slowly at about late rates. Supplies of wheat continue short at the country markets, and provincial trade has been marked by increased firmness. Barley has advanced 1s. to 2s. per qr. in many exchanges, but oats have undergone very little change in value. At Liverpool on Tuesday the market was well attended, and white wheat realised 1d. per cwt. more money, while red declined 1d. to 3d. per cwt. under pressure of large supplies. Maize was very strong, and with an active demand prices rose 1s. to 1s. 6d. per qr. higher on the week. Flour was firm, but Barley and Oats were inactive at a decline of 6d. per qr. on the latter. The week's imports were 82,000 qrs. of wheat, and 29,000 qrs. of maize. At Newcastle there has been as low sale for wheat at about late rates, but maize has been firm, and the turn dearer. At Peterborough wheat has been in small supply, and in some instances needy buyers have had to pay more money. Barley realised an advance of 1s. to 2s. per qr., and other sorts of feeding corn maintained late rates. At Edinburgh the market has been moderately supplied with grain from the farmers, and native wheat has sold slowly at about last week's prices. Barley was the turn dearer, and oats unaltered in value. At Leith the weather has been wet and stormy, and in the later districts very little progress has been made in securing the remainder of the outstanding crops. The arrivals of grain from abroad have been to a fair extent, and the trade has ruled quiet for all articles. At Wednesday's market both Scotch and foreign wheat were in limited request at former prices, but malting barley was quoted 6d. to 1s. per qr. dearer. Flour was unaltered, and fine oats the turn in sellers' favour. At Glasgow the week's supplies have been fair of all articles except maize, of which there has been no arrival. The market on Wednesday was scantily attended, and the trade was dull for wheat and flour at a decline of 6d. to 1s. per qr. and sack respectively. Maize was 1s. per qr. dearer, and other descriptions of feeding corn unchanged. At Dublin the weather has been fine, and wheat has declined 6d. per qr., but without attracting an increased demand. Maize has been in good request, at 6d. per qr. more money. At Cork the trade has ruled dull for wheat at about late rates, but a good inquiry has been met for maize at last week's extreme prices.

The following are the reports from Mark Lane for the past five weeks:—

Monday, Oct. 1.—The arrivals during the past week have been: English wheat, 7,491 qrs.; foreign, 43,609 qrs.; Exports, 7,590 qrs. English wheat is a very slow sale, though offered at a reduction of 1s. to 2s. cr qr.

Foreign is held with some firmness, but the demand is disappointing, and where sales are made prices are 1s. per qr. lower. Country flour, 17,477 sacks; foreign, 1,090 sacks, 491 brls. Flour is dull, and rather less money has to be taken to make sales. English barley, 1,854 qrs.; Scotch, 125 qrs.; foreign, 7,093 qrs. Malting barley, both English and French, is 1s. lower. In grinding no change. Malt: English, 14,295 qrs.; Scotch, 125 qrs. Exports, 484 qrs. Malt meets a slow sale. The demand is very limited. Maize, 7,617 qrs. Maize is for the most part out of condition. Good lots sell at former prices. English oats, 1,324 qrs.; Irish, 2,600 qrs.; foreign, 37,115 qrs. Exports, 683 qrs. Oats are rather better than on Friday, but 3d. and 6d. per qr. below last Monday's. English beans, 1,114 qrs.; foreign, 7,547 qrs. Beans and peas sell fairly at previous rates. Linseed: 9,838 qrs.; exports, 299 qrs. In linseed there is no change.

Monday, Oct. 8.—The arrivals during the past week have been: English wheat, 5,807 qrs.; foreign, 85,086 qrs. Exports, 1,745 qrs. There was a small supply of English wheat at market this morning, and the trade ruled steady at last Monday's prices; of foreign the arrivals were heavy, and sales progressed very slowly until the close of the market, when a fair retail demand was experienced at late rates. Country flour, 20,698 sacks; foreign, 4,104 sacks and 1,281 barrels. A slow sale for both sacks and barrels at unaltered currencies. English barley, 3,443 qrs.; foreign 18,025 qrs. Malting varieties were unchanged, but grinding sorts ruled dull, and were the turn cheaper to sell. Malt: English, 13,302 qrs.; Scotch, 350 qrs. Exports, 334 qrs. Prices were nominally unaltered, but holders evinced more disposition to sell. Maize, 6,277 qrs. In fair demand, but last week's prices could not be exceeded, although in many cases holders declined to sell except at an advance of 6d. per qr. English oats, 1,623 qrs.; foreign, 48,404 qrs. Exports 341 qrs. The trade ruled slow for all descriptions at barely late rates. English beans, 901 qrs.; foreign, 2,348 qrs. A moderate enquiry at unaltered quotations. Linseed, 12,292 qrs. With large supplies to come forward, business was dull, and former prices were with difficulty obtained.

Monday, Oct. 15.—The arrivals during the past week have been: English wheat, 5,262 qrs.; foreign 94,612 qrs.; Exports, 6,033 qrs. There was again a small supply of home-grown wheat at market this morning, and the trade ruled quiet but steady at last Monday's prices; of foreign the arrivals were unusually heavy, and with a moderate attendance of millers a quiet demand was experienced at a decline of 1s. per qr. on new American varieties. Country flour, 12,335 sacks; foreign, 5,591 sacks, and 10,327 brls. Business was quiet, but last week's prices were maintained. English barley, 2,416 qrs.; Scotch, 248 qrs.; foreign, 5,344 qrs. Both malting and grinding descriptions sold slowly, at former prices. English malt, 11,645 qrs., Scotch, 1,251 qrs. Exports, 1,415 qrs. A fair sprinkling of samples of new at market, for which prices ranged from 69s. to 75s. per qr. Old sorts quiet, and the turn easier. Maize, 25,049 qrs. A fair inquiry for sound granary parcels, at fully late rates. Inferior sorts, if anything, a shade lower. English oats, 8,170 qrs.; Irish, 110 qrs.; foreign, 38,480 qrs. Exports, 2,317 qrs. A slow sale was experienced for all varieties at about last week's currencies. English beans, 753 qrs.; foreign, 123 qrs. In moderate request at former values. Linseed, 78,962 qrs. Exports, 1,173 qrs. Rather firmer.

Monday, Oct. 22.—The arrivals during the past week have been: English wheat, 5,052 qrs.; foreign, 67,989 qrs. Exports, 4,459 qrs. The supply of English wheat fresh up to market this morning was moderate, and



J. J. Mechi

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PLATE.

MR. J. J. MECCHI.

Mr. J. J. Mechi, whose portrait we give on the opposite page, was born at Blackheath, on the 26th of May, 1802. He was educated chiefly by the late Rev. M. Watson, and at the age of seventeen he became clerk to a mercantile firm in the City, and remained with them until 1827, when he opened the afterwards well-known business in Leadenhall-street. In 1841 he purchased four farms, and shortly afterwards went to reside at one of them, Tiptree Hall, near Kelvedon. In 1844 he wrote his first contribution to agricultural literature, and since that time he has been one of the best-known of writers on agricultural topics. His exposure of some of the abuses of bad farming excited a great deal of attention, and at first created much enmity; but his fellow-farmers ultimately came to see that Mr. Mechi had done them more good than harm, and those who knew him were charmed with his geniality and good temper, even when they disagreed with his theories of farming. One of the most useful acts of Mr.

Mechi's life was the founding of the Agricultura Benevolent Institution, which was started by him in 1860, and which last year distributed annuities amounting to nearly £10,000 to destitute farmers' widows, and farmers' daughters.

In 1856, Mr. Mechi was made Sheriff of London and Middlesex, and in 1858 he was unanimously elected Alderman of the Ward of Lime-street, an office which he held till 1866, when he resigned on account of a loss of £30,000 through the failure of the Unity Bank. This loss somewhat restricted Mr. Mechi in the application of capital to his favourite pursuit, farming; but Tiptree Hall is still in many respects a model farm, the returns from it being greatly in excess of the average of land much superior in natural fruitfulness. During the present year Mr. Mechi has been Chairman of the Central Farmers' Club, a position which he has filled to the satisfaction of the members, and with credit to himself.

DAIRY FARMING,

Dairy Farming, in its various branches, is a subject well deserving the attention it is now receiving from agricultural societies and the agricultural press. Its importance can scarcely be overrated, and it affords a very wide field for discussion and investigation. Although it may, from several points of view, be considered a separate and distinct branch of agricultural industry, it is seldom we find it treated as such in practice. Even in what may be termed dairy districts proper, it is only on exceptional farms that dairy products are treated as the sole rent-paying industry. In the general run of cheese and butter-making farms these articles are, in reality, mere by-products, and perhaps to this may be attributed the inferior quality of the bulk of our home-made articles. It is customary

to speak of the cow as a milk-producing machine, whereas it is only when within the precincts of a milk-walk that the term will correctly apply. The generality of those who keep cows have other objects in view besides the production of milk viewed in the light of raw material. Hence the frequent discussion of a question which is almost daily cropping up in the pages of agricultural journals, as to what constitutes a good dairy cow, and the division of opinion which obtains on this point, show clearly enough that the so-called dairy requirements are so varied and incompatible that it is impossible for any one animal to possess all the qualifications which are urged as desiderata. The breeder regards his cow as a mother and a nurse, the source from which he is to obtain future animals. Those will be the

breeding animals which in time, with care and skilful management, are to form a herd possessing distinctive types of excellence, to establish the breeder's reputation and make his fortune; or they will be bullocks. In either case something very much outside mere milking qualities is sought for. In some cases, as with the Herefords, West Highlanders, and possibly some other breeds, the milk is devoted entirely to the sustenance of the young animals, the cows being sold at or a little past their prime as barrens, or fed out to the butcher direct from the breeder, thus supplying local wants; whilst the bullocks are sold to other districts where they are finished. This may be regarded as one extreme, pertaining only to certain restricted localities. On the other hand, in the cheese and butter districts, the calves are sold by contract at about a week old—except a few heifer calves—and the cow is ultimately sold with a calf by her side to make room for a younger and better animal. This is another extreme—the one all for meat and the other all for milk. But the great bulk of the country is farmed under systems of what is termed mixed husbandry, and the cow is put to a variety of purposes. The calves are sometimes fattened, sometimes reared partially by hand, and sometimes entirely so, butter being made in variable quantity and of still more variable quality. Dairying, therefore, is not made the distinctive and carefully manipulated industry in this country which it is elsewhere.

The latest contribution to the literature of this subject is the paper read before the Farmers' Club on "The Products of the Dairy" by Mr. Allender, whose practical experience qualifies him to treat his subject from the points of view to which he has confined himself, namely the factory system and town dairying. He tells us, at the onset, that he has come to the conclusion that to be profitable the dairy industry should be entered upon on a large scale, with the most approved modern appliances, and made a business of, which we take to mean done in a businesslike manner. He tells us that the tendency of the age is for big things to get bigger, and for little things to become less; that the factory system is in accordance with the age in which we live, and convenient to men of small means; that the necessary attention to cleanliness, uniformity of routine, and scientific detail are thereby better secured; and that the disinclination of farmers' wives and daughters to undertake and manage the dairy, together with the scarcity and inefficiency of dairy maids, may thereby be counterbalanced, and rule-of-thumb abolished. We endorse this fully; one-half at least of the shortcomings which are charged to

this particular industry may be traced to the parlour rather than to the dairy. It is not by any means outside our province to refer to duties which should be undertaken and scrupulously performed by farmers' wives, but we fully recognise the fact that in so doing we are treading on dangerous ground. An American contemporary has recently had the temerity to say that the farmer's daughter who can put a square patch on a pair of pantaloons is more likely to make a useful helpmate than one whose accomplishments will enable her to work a green dog on a scarlet wool ground; and we may add that a knowledge of the manipulations of the dairy is by no means inconsistent with the education and refinement of a young lady who has the good fortune to be able to call herself a farmer's daughter. Mr. Allender goes on to say that a milking cow will, with proper management, yield a larger money return than a fattening beast; that "cheap" feeding, or rather poor feeding, is a mistake; that the difference between a first-class article and a second-class article—which, when expressed in money value, is very great indeed—is, in reality, to a great extent, a question of attention to minute detail; and that, having many advantages over our neighbours, all we really need is the common-sense to avail ourselves of them, and to profit by them. Here again Mr. Allender's position is well-chosen, his arguments weighty, and his deductions such as will, doubtless, commend themselves to our readers, as they do to us. But there are points in his paper with which we cannot agree. He is at home when talking of the commercial detail of the factory system, but at sea when dealing with the animals themselves, and their requirements. He looks at his cow as a machine, and would treat her as a machine, but at the same time expects her to perform natural functions whilst being kept in a highly artificial condition. He would house his cows summer and winter, never turning them out except when dry for calving; he would feed them highly so that they should be at all times fit for the butcher in case of accident; and yet he would breed from them. Now, whether for town or country, we consider this principle to be at fault. As Mr. C. S. Read very justly observed, it is incompatible with the welfare of breeding stock, both as regards the dam and her offspring. We consider breeding to be quite out of place in the milk walk. Here Mr. Allender allows himself to fall into the almost universal error of mixing up incongruous elements. The essentials of a milk walk, as we understand them, are that there should be a sufficient number of cows to produce a given quantity of milk; that those animals should be of a class which will pay

for high feeding as butchers' beasts; that they should be treated from the time they enter the milk walk as machines only, and that whether they turn out flesh-makers or milk-producers, it should be a matter of indifference to the owner, so long as they do one or the other, or possibly both, in a paying manner. Under these conditions an animal might be in milk for three months or for two years, and pay equally well in either case. But we contend that when an animal enters a milk walk its breeding days should be at an end. Taking this for granted, we think the weak point, or rather grave error, in Mr. Allender's otherwise excellent paper is that he would apply town rules and conditions of life to country cows. Whilst treating of the products of the dairy he is eminently practical, but when dealing with the animals themselves we think he falls into the error of which we speak. The factory system falls exactly in line with the opinion we hold as to the future of stock-breeding in this country; we think it is to the arable farms that our large towns must look for that increase in their supply of milk which they so greatly need. If the arable farmer cannot live by breeding, rearing, and feeding cattle of good quality, we fail to see how he is to improve his position at all. No one will dispute that a greater number of stock can be so reared and fed on a given quantity of arable land than on the same quantity of pasture land of equal quality. The transition from arable to pasture—where it has really taken place—is generally a question of reducing the labour bill; but its direct tendency is to reduce or restrict the number of animals the land will produce. *Appropos* of this, our readers will remember an article we published last week from *The Pall Mall Gazette*, entitled, "Pasture and Population," in which the writer, summing up his argument, declares the logical sequence of it to be that pasture is the most economical producer of meat, and consequently most favourable to increase of population. We consider this to be most fallacious. Every country goes through a pastoral stage before it arrives at an agricultural stage, and it does not need a moment's reflection to show that land under the plough will produce more food than land under grass. To produce plenty of milk, cows must undoubtedly be well fed, and properly housed, as Mr. Allender very justly insists; but if they are the ordinary breeding stock of a farmer they must not be kept in the purely artificial condition which a milk-walk necessitates. The real question of interest just now is how shall an arable land or "mixed husbandry" farmer make his stock pay? We say by breeding, rearing, and feeding. The rearing need not take all

the milk; probably a moiety of it could, under ordinary circumstances, be spared. Starting on these premises, the next question is how to dispose of it. First of all it must be refrigerated and aerated, which Mr. Allender insists on as being imperatively necessary. Then it may be sent to a factory, should such an establishment exist within convenient distance, or it may be sent to the nearest town. We think this better than butter-making, or cheese-making, as a rule; that is to say, speaking very plainly, for the generality of those who now spoil their milk by making the above-mentioned articles of an inferior, or at least second-rate quality. There is no reason why a milk walk on a small scale should not be maintained on every farm from which milk is sent away or produced as a staple industry. No better plan could possibly be adopted of feeding out cows; but breeding animals require very different treatment. One of the greatest necessities of the age in which we live is a more plentiful supply of pure milk to towns, and one of the greatest curses to agriculture is the maintenance of those hot beds of disease, the town dairies. At least two-thirds of the milk supply of London is said to come from the country; why not the remainder? Abundant and convincing testimony was brought out in evidence before the Cattle Plague Committee that by the constant introduction of fresh animals into these hospitals for Pleuro-pneumonia the disease is kept alive, healthy animals being simply as fuel to fire; and not only so, but the flame is renewed regularly by Dutch cows, whose special mission appears to be keeping the disease chronic. To sum up our views on dairy industries in reference to arable farms, we think that good beef may be produced, and at the same time a considerable quantity of milk spared to bring in ready money. For the rest, we can do no better than refer our readers to the clear and practical details given by Mr. Allender on matters connected with the products of the dairy.

SELLING ARGYLESHIRE.—It is quite openly asserted in the North that arrangements have been definitely concluded for the unopposed return of a Conservative for Argyleshire on the elevation of Lord Lorne to the peerage, and this with the connivance of the present member and his father, the Liberal Duke of Argyle. Of the *rapprochement* thus adumbrated between the Premier and the Maccallum More the cause lies outside the regions of politics, and the noble chieftain who is so fond of speaking of "the Princess my daughter" and of "Lorne's mother-in-law," is at least as supple a courtier as he is an industrious politician. But, strange to say, notwithstanding his unassuming manners and inoffensive bearing, he is not popular either with his clan or in his county; and I would venture to remind Mr. Wugfield Malcolm, who is the candidate designate, and who already sits for Boston, of the old proverb, that a bird in the hand is worth two in the bush.—*World*.

THE AMERICAN MEAT SUPPLY.

Professor Sheldon, of the Agricultural College, Cirencester, contributes to the Royal Agricultural Society's *Journal* a report on the "American and Canadian Meat Trade," in which he deals at some length with the agricultural resources of the American continent, giving copious statistics, which, he tells us, are but approximations at the best. Still they serve the purpose of what Lord Salisbury would call a "big map." They help us to form an idea of the resources of a country which has been described by a native as being "bounded on the North by the arctic circle and on the South by the day of judgment." Speaking of the United States, Professor Sheldon tells us that "In January of last year there were 27,870,700 cattle in the United States, and as they had been increasing since 1873 it is safe now to assume that there are at the present time, in round numbers, twenty-eight millions. Of these there will be at least six millions annually available for slaughter. If we allow these to weigh 700 lb. each net—which is certainly not too high an average for American fat cattle—we have a total of 4,200,000,000 lb. of beef per annum available for human food, or 95 lb. per head of a population which is now estimated to be forty-four millions. Of sheep there are now, in round numbers, thirty-six millions. Of this number there will be, say, one-third, or twelve millions annually, available for slaughter; and if we allow these to average 70 lb. each net, we have a total of 840,000,000 lb. of mutton, or 19 lb. per head of the population. Of pigs there are twenty-six millions, more or less. Of this number there will be, say, twenty millions annually available for slaughter; and if we allow each pig to weigh 140 lb. net, we have a total of 3,640,000,000 lb., or 82 lb. per head of the population. . . . It is estimated that we consume annually 100 lb. of meat per head of our population; and if our population may be estimated at thirty-six millions, we thus eat 3,600,000,000 lb. of flesh in one year. Now, if the Americans eat no more per head of population than we do—and we may take this for granted—it follows that

	lb. of flesh-food per annum
The Americans produce . . .	8,686,000,000
" " eat . . .	4,400,000,000
<hr/>	
The Americans can spare . . .	4,286,000,000
The surplus of animal food available for exportation from the United States is thus greater than	

the whole quantity which is eaten in the British Islands. . . . And, beyond the quantities mentioned above, we must remember that Canada is already a large meat-producing State, and that she bids fair to rival, in course of time, the United States themselves in this department." From information received Professor Sheldon thinks the price of flesh-meat has been for some years declining in America, and that it is 15 per cent. lower than it was two years ago. The cost of a Canadian ox of 1,600 lb. live weight, which represents 912 lb. dead weight, he shows (from Professor Buckland's statement) to be £13 4s., where reared and fed. Freight and various charges make it £22 8s. when landed on our shores. The freight of a live animal from New York to Liverpool is stated to be £8 10s. including everything, and the freight of a corresponding carcass of dead meat 30s. Value of offals in New York—livers 1s. 9d. to 1s. 10d., hearts 9d.; the heart, liver, head, hoofs, and entrails, together, 5s. 10d. to 6s. Professor Sheldon thinks the high protective tariffs of the United States, by preventing the export of British manufactures, will be likely to increase the freightage of dead meat, whereas the Canadian trade may benefit from the fact that return cargoes are readily obtainable. All things considered, he thinks the dead meat trade will expand, though not to an extent corresponding with the hopes of Americans or the fears of our agriculturists, dairymen especially.

Professor H. E. Alvord, of Easthampton, Massachusetts, also contributes a paper on a similar subject—"The American Cattle Trade"—in which the reader will find a mass of detail and much useful information. He considers the resources of the United States to be quite equal to any demand likely to be made on it by Great Britain, and also that the production of meat will pay the American producer much better than corn. He says, "It is manifestly better for the farmers to turn their surplus corn into the more condensed value and bulk of meat at home than to sell the grain there, or ship it Eastward. The expense of sending a car-load of cattle from the Mississippi Valley to the Atlantic coast is just about the same as for an equal weight of corn. But beef-cattle, when they reach New York, are worth 28s. per cental (gross), while 100 lb. of corn will sell for only 6s." Again:—"Eastern consumers and

the exporters must continue to depend for their main supply upon the great corn States represented by the Chicago market; and as the demand upon that region for fat cattle will continue to exceed the natural increase of their own herds, they, in turn, must look to the Far West and Southwest for most of their young animals, or 'stockers.' Therefore Professor Alvord thinks it is evident "that the cost of producing a two or three-year-old bullock on grass alone, in the vast pasture which used to be called the great American desert, will largely determine the price of cattle in Chicago. Add the corn-crop (maize) and its value in the Mississippi basin, and we have the two chief factors governing the price of beef on the Atlantic slope, and, it may be, in Great Britain also." We do not, of course, know whether the Professor's figures may be relied on, but he appears to have a

minute as well as an extensive knowledge of his subject. He points out the probability of the animals being, for the future, slaughtered in the producing States and sent as dead meat to New York; this, and other matters of detail, would lessen the cost, and the Professor thinks we shall ultimately have good American meat sold in Liverpool and Glasgow at 4½d. per lb. What may come to pass in the remote future we cannot pretend to determine; but even if good meat can be profitably produced and sent here at such a low price, which we doubt, it must be many years before the supply will be so large as to necessitate selling at that rate. When the American farmer converts nearly all his surplus corn into meat, and sends it so as to be sold here at 4½d. a pound, it will be time for the British farmer to increase his wheat-growing acreage again.

AGRICULTURAL SOCIETIES.

ROYAL OF ENGLAND.

MONTHLY COUNCIL, Wednesday, November 7th, 1877.
Present—Col. Kingscote, C.B., M.P., President, in the chair; Earl Cathcart, the Earl of Feversham, Lord Chesham, Lord Vernon, Lord Easington, M.P., the Hon. W. Egerton, M.P., Sir M. W. Ridley, Bart., M.P., Sir W. E. Welby-Gregory, Bart., M.P., Mr. Arkwright, Mr. Aveling, Mr. Aylmer, Mr. Booth, Mr. Bowly, Mr. Cantrell, Mr. Dent, Mr. Druce, Mr. Evans, Mr. Frankiah, Mr. Brandreth-Gibbs, Mr. Hemaley, Mr. Horley, Mr. Hornsby, Mr. Heward, Mr. J. Bowen-Jones, Mr. Leeds, Mr. McIntosh, Mr. Martin, Mr. Masfen, Mr. Pole-Gell, Mr. Randall, Mr. Ransome, Mr. Rawlence, Mr. Russell, Mr. Sanday, Mr. Stratton, Major Turbervill, Mr. Wakefield, Mr. Whitehead, Mr. Jacob Wilson, Professor Simonds, and Dr. Voelcker.

The following new members were elected:—

Baker, Daniel, of Manor House, Roggiott, Chepstow.
Bartholomew, Francis, of Waddington Heath, Lincoln.
Blathwayt, Robert Wynter, of Barton Fields, Derby.
Brookfield, W. C., of Stafford.
Brown, Henry, of Winterbourne Monkton, Swindon.
Burgess, William Henry, of Nottingham.
Callwell, Lieut. W. H., of Lismoyne, Dunmurry, Co. Antrim.
Clark, Joseph Porter, of Hyde Hall, Buntingford.
Coleman, George, jun., of Throcking Buntingford.
Evans, William Lewis, of Fazakerley House, Prescott.
Fields, John Lyon, of The Poplars, Addlestone, Weybridge Station.
Fry, C. E. Bruce, of Banbury.
Harding, John, of Stone, Staffs.
Harris, James, of Fletchamstead, Coventry.
Heelis, John Alcock, of Garbridge, Appleby.
Henry, Mitchell, M.P., of Kylesmore Castle, Co. Galway.
Howell, Leigh, of Bagillt Foundry, Flint.
Huddleston, T. F. O., of Upton Grey, Winchester.

Jackson, Thomas, of Newsham Hall, Preston.
Langham, Maurice, of Shipton-on-Cherwell, Oxford.
Laws, Percy C. J., of Barrasford, Wall, Northumberland.
Lea, John, of Stapleford Hall, Chester.
Lewis, T. L. Hampton, of Bodior, Holyhead.
Lucas, Herbert T., of Warnham Court, Horsham.
McNiven, Rev. C. M., of Berryfield, Godstone.
Marriott, William T., of Bleasby, Southwell.
Miller, Lieut.-Col. James, of Shotover, Wheatley, Oxon.
Name, Frederick, jun., of Throwley Parsonage, Faversham.
Palmer, George William, of Greenwood, Bishops Waltham.
Palleine, Henry, of Baxter Hall, Selby.
Pyman, Walter H. S., of The Willows, West Hartlepool.
Rayner, George Pritchard, of Llanddysan, Llanelly.
Roberts, John, of Geigas House, Bodfari, Rhyl.
Simpson, George, of Mayfield House, Ashbourne.
Sweetman, John, of Drumbaragh, Kells, Co. Meath.
Tatton, Thomas Egerton, of Wythenshawe Hall, Northenden.
Theobald, Horace, of Adderley Lodge, Market Drayton.
Tucker, G. Neilson, of 79, Mark-lane, E.C.
Walkden, Thomas, of Millington, Altrincham.
Walkden, William, of Carrington Hall, Sale, Cheshire.
Watney, John, of Distillery House, Wandsworth, S.W.
Wilson, W. F., of The Gale, Abbey Town, Carlisle.
Woodcock, Frederick, of Rothley, Loughborough.

FINANCE.—Mr. RANDELL presented the report, from which it appeared that the Secretary's receipts during the past three months had been duly examined by the Committee, and by Messrs. Quilter, Ball, and Co., the Society's accountants, and found correct. The balance in the hands of the bankers on October 31 was £1,173 6s. 7d. The quarterly statement of subscriptions and arrears to September 30, and the quarterly cash account, were laid on the table. The arrears then amounted to £1,239.

The Committee recommended that the sum of £2,000, now on deposit, be transferred to the current account.

A list of members whose subscriptions are in arrear

had been sent to Members of Council, with a request that they will use their influence in their several districts to obtain payment of those arrears. The Finance Committee hoped that the Members of Council will in that way obviate to a great extent the necessity of employing other means to reduce the amount of such arrears.

This report was adopted.

JOURNAL.—Mr. DENT (Chairman) reported that the *Journal* had been published and its issue to members of the Society nearly completed. Its publication had been delayed in the hope of including Mr. Hannam's report on sheaf-binders, but this report had been omitted in consequence of Mr. Hannam's continued indisposition. The Committee recommended the payment of the accounts connected with the issue of the *Journal*, and that applications for the exchange of publications from the editor of the *Indian Agriculturist*, and the Central Commission of Uruguay, be complied with. They further reported on the steps which had been taken with reference to the memoir of British Agriculture, to be presented to the Agricultural Congress which will be held in Paris next year in connection with the International Exhibition. This report was adopted.

STOCK PRIZES.—Mr. JACOB WILSON reported that the Committee had arranged a preliminary prize-sheet for the Bristol meeting, which will be printed and sent to Members of the Council for consideration at the December meeting, and that they had also recommended a list of prizes for the consideration of the Bristol Local Committee. This report was adopted.

GENERAL BRISTOL.—Mr. BRANDRETH GIBBS reported that the Westbury-on-Trym Bee-keepers Association having applied for permission to exhibit bees at the Bristol meeting, the Committee recommended that they be informed that bees can be exhibited by the Association taking space in the yard in the usual manner. The Committee also recommended that the Bristol meeting shall commence on Wednesday, the 10th of July, and that the implement yard shall be opened to the public on Tuesday the 9th; and that there be a separate booth, with a distinct contractor, for the supply of tea, coffee, and similar light refreshments to the public. This report was adopted.

IMPLEMENT.—Mr. HEMSLEY reported that the Committee recommended the addition of the following new regulations to the implement prize sheet:—

1. In the catalogue there shall be no statement of any prize awarded to an implement except it be such as may have been awarded by the Royal Agricultural Society.

2. No placard or other statement shall be attached to any machine, implement, or other article in the Society's show-yard, referring to any prize, except such as may have been awarded to it by the Royal Agricultural Society.

3. In the show-yard exhibitors must use smokeless coal, which, for their convenience, will be provided and sold at a fixed price by the Society, or by an agent duly appointed by it.

4. Shafting, belts, gearing, high-speed machinery and any other exhibits likely to prove dangerous to the public, shall be securely fenced and protected to the satisfaction of the Society's stewards or engineers; but such approval by the stewards or engineers shall not relieve the exhibitor from his liability under Clause 51.

5. Emery wheels and similar grinding machinery driven at high speeds will not be allowed to be exhibited in motion; and the decision of the Society's stewards or engineers in reference to such machinery shall in all cases be final and of immediate effect.

6. Engine-drivers in charge of boilers under steam, and of steam-engines when running, shall not absent themselves from their posts without leaving their machinery in charge of competent persons.

The Committee recommended that prizes to an amount not exceeding £100 be offered at the Bristol meeting for improved dairy machinery and fittings. This report was adopted.

The stewards of implements reported that they endorsed the recommendation of the judges of automatic sheaf-binders tried in connection with the Society's late show at Liverpool, to the effect that the offer of the Society's gold medal shall be renewed at the Bristol meeting. The following is the judges' report:—

We have the honour to report that, having made a careful and thorough examination of the three American sheaf-binding machines (which were tried on wheat and oats at Mr. Sootson's farm at Aigburth), we are of opinion that whilst great credit is due to the three inventions—viz., those of Walter A. Wood, D. M. Osborne and Co., and C. H. McCormick, for the considerable efficiency attained, neither of them have, as regards the requirements of English farmers, attained that perfection which would justify us in awarding the gold medal of the Society. We, however, strongly recommend that a silver medal be awarded to Walter A. Wood, as a recognition of progress, and that high commendation be bestowed on the binding mechanism employed by Osborne and Co. Believing in the great importance of this invention when made practically efficient, we shall be glad to know that the Society proposes to continue their offer of a gold medal for a efficient self-binder.

(Signed) HENRY CANTRELL.
JOHN COLEMAN.

The following resolution, from the Agricultural Engineers' Association, was presented by Mr. AVELING, and referred jointly to the Implement and Showyard Contracts Committee:—

The Council of the Agricultural Engineers' Association desires most respectfully to bring under the attention of the Royal Agricultural Society the disadvantage arising from the large area of ground occupied by the showyard. Visitors to the show find great difficulty in getting through the business many of them have come long distances to transact, and those also who come to learn, find the labour of gaining the information they desire too arduous for their powers. To render more easy an examination of the agricultural portion of the Show, the Council would urge upon the Council of the Royal

Agricultural Society the desirability of providing a yard, separated from the other portion of the Show, for the exhibition of all articles not strictly agricultural.

SHOWYARD CONTRACTS.—Mr. JACOB WILSON (chairman) reported that the Surveyor had submitted his certificates recommending the payment of the last instalment to the contractor, amounting to £698 9s. 7d. The Surveyor had also handed in plans for the proposed showyard at Bristol, the consideration of which they postponed until the December meeting. This report was adopted.

CHEMICAL.—Mr. DENT presented the following quarterly report of the Committee, which was ordered to be printed in the agricultural newspapers:—

1. A sample of manure, sold under the name of Organic Manure, sent by Mr. William Levett, Glassenbury, Cranbrook, Kent, on analysis yielded the following results:—

Moisture	8 23
*Organic matter	34 64
Monobasic phosphate of lime.....	88
Equal to tribasic phosphate of lime rendered soluble by acid	(137)
Insoluble phosphates	3 53
Sulphate of lime, oxide of iron, and albumina, &c.....	48 77
Insoluble siliceous matter.....	9 96
	<hr/>
	100 00

*Containing nitrogen	1 91
Equal to ammonia	2 32

This manure was bought at £5 a ton for cash on rail in London from Messrs. Lywood and Son, wholesale rag and manure merchants and furriers, Albany-road, Old Kent-road, S., who with the invoice sent the following printed copy of analysis:—

COPY OF ANALYSIS OF ORGANIC MANURE.

(Prepared for use as a top-dressing).

Laboratory, 11, Eaton-terrace,
St. John's Wood, N.W., Feb. 12, 1877.

Moisture	10 13
*Nitrogenised organic matter.....	34 22
Phosphate of lime	10 46
Sulphate of lime	29 89
Alkaline salts and magnesia	3 14
Insoluble matter	12 16
	<hr/>
	100 00

*Containing nitrogen	3 80
Equal to ammonia	4 25

(Signed) ALFRED SIBSON, F.C.S.

Had the manure corresponded with this analysis, it would have contained 10 46 per cent. of phosphate of lime, and have yielded 4½ per cent. ammonia, whereas in the sample taken from the bulk of five tons sold to Mr. W. Levett, Dr. Voelcker found only 5 per cent. of phosphate of lime, and 2½ per cent. of ammonia in round numbers, that is only about one-half the amount of the fertilising constituents upon which the value of this manure mainly depends.

A manure like the sample analysed, instead of being worth £5 in cash in Dr. Voelcker's judgment should not cost much more than £2 10s., and certainly is not worth more than £3 a ton.

2. Mr. Levett also sent a sample of nitrate of soda, a ton of which he bought from Messrs. J. L. Hale and Co., Anerley, near London, at £11 15s. per ton, ordered Feb. 21st, 1877, through "E. Reed, Agent, Cranbrook," and delivered by Hale and Co. on March 3rd.

Receipt of the order was acknowledged as follows:—

Colchester House, Anerley, near London, S.E.

Mr. LEVETT.—Dear Sir,—We beg to acknowledge the receipt of your order (through our agent) for 1 ton nitrate of soda, £11 15s. per ton, ex Docks in London.

Credit till September next

Your favour shall have our earliest attention.—We are, yours, truly,
J. L. HALE & Co.

NOTICE.

The authority of our agents is strictly limited to taking orders. They have no power to bind us in any transaction. We are not responsible for money or goods delivered to them nor for anything done or said by or to them. All contracts and terms must be considered as confined to and included in the papers which emanate from our office, and our receipt is alone a sufficient discharge.

24th Feb., 1877.

Despatch of the nitrate was advised in the following communication, dated March 1st, 1877:—

Colchester House, Anerley, near London, S.E.

Mr. LEVETT.—Dear Sir,—In accordance with your order given to our agent, we have sold and delivered to you this day:—10 bags nitrate soda (they have gone with more in the name of Mr. Walter Dungey. Please ask for 10 bags nit. soda in his name), and have directed the same to be left at Staplehurst Station.

(Then follows a repetition of the above "Notice" as to the authority of their agents).

On analysis the nitrate yielded the following results:—

Moisture	7 67
Chloride of sodium (common salt)	32 70
Sulphate of lime and magnesia	90
Insoluble matter	13
Pure nitrate of soda	58 60

100 00

Good samples of nitrate of soda contain from 94 to 95 per cent. of pure nitrate. The sample sent by Mr. Levett contained only 58½ per cent., and about one-third its weight of common salt, and in comparison with first-class samples of nitrate of soda was at that time not worth more than £8 a ton.

3. Another sample of nitrate of soda was sent on the second of May by a member of the Society, and on analysis yielded the following results:

Moisture	2 98
Chloride of sodium (common salt).....	32 59
Sulphate of lime and magnesia	56
Insoluble matter.....	19
Pure nitrate of soda	63 68

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Like the preceding sample it contained much common salt. In reply to the usual inquiries, the following reply was received:

DEAR SIR,—I am both sorry and annoyed that I cannot give you the information you request in your letter of the 29th ult.

The facts of the case are these—a neighbour of mine . . . bought the nitrate about the third week in March, at £13 per ton, and he agreed to let me have a small portion of it. My remark was, as I knew nitrate had risen in price, "You have bought it well—have you any guarantee?" He said, "Yes; he warrants it 95 per cent." I told him to let me have a sample, and I would send it up to you, and as soon as you forwarded me the analysis I gave it to him, and I then went from home for a time. On my return I asked him to fill up the form you sent me, and to my great annoyance I found he had condoned the matter by agreeing to take another ton of the man (it was originally three tons), so he was to have four at the same price; he therefore objected to fill up the form.

Under these circumstances I am unable to comply with your request, glad as I should have been to have done so.—Yours truly,

To Dr. Voelcker.

* * * *

4. A sample of bone-dust sent from the neighbourhood of Chirbury, Shropshire, and offered at £8 per ton, was found of the following composition:

Moisture	4.53
*Organic matter	20.47
Phosphate of lime	21.71
Sulphate of lime (gypsum)	15.89
Oxide of iron, and alumina, &c....	9.58
Insoluble siliceous matter (sand)...	27.83

100.00

*Containing nitrogen	1.55
Equal to ammonia	1.80

This bone-dust, it will be seen, was largely adulterated with gypsum and worthless earthy matter. In consequence of the above analysis no sale was effected.

5. Another sample of bone-meal, sold at £7 per ton, was sent for analysis from the same neighbourhood. This bone-meal had the following composition:—

Moisture	3.57
* Organic matter	19.80
Phosphate of lime	36.57
Sulphate of lime (gypsum)	32.50
Carbonate of lime	3.92
Alkaline salts and magnesia	2.01
Insoluble siliceous matter	1.63

100.00

* Containing nitrogen	1.12
Equal to ammonia	1.36

In comparison with genuine bone-dust, selling at £8 a ton, this sample was worth only about £5 a ton.

6. Special compound manures are frequently sold at far too high a price.

An example in illustration of this fact was brought under my notice by Mr. T. R. Hulbert, North Cerney, Cirencester, who sent me a sample of barley manure which had the following composition:—

Moisture.....	15.62
*Organic matter and water of combination.....	20.32
Monobasic phosphate of lime	7.37
Equal to tribasic phosphate of lime rendered soluble by acid	(11.54)
Insoluble phosphate of lime	9.75
Sulphate of lime	24.54
†Alkaline salts and magnesia.....	18.85
Insoluble siliceous matter	4.15
	100.00

*Containing nitrogen.....	1.66
Equal to ammonia	2.01
†Including nitrate of soda.....	14.60
Containing nitrogen	2.40
Equal to ammonia	2.91
Total nitrogen.....	4.06
Equal to ammonia	4.93

This barley manure, which appears to be a mixture of bone-superphosphate and nitrate of soda, is worth about £8 a ton, and was sold at £11 a ton.

In reply to inquiries, Mr. Hulbert wrote as follows:—

North Cerney, Cirencester, June 25, 1877.

DEAR SIR,—I do not think I received an invoice of the manure, and if I did so I have mislaid it. It was to cost £11 per ton, subject to discount. The seller was On my sending him the analysis he requested me to use the manure, and if I was not satisfied with the result he would have nothing for it, consequently I have done so.—Believe me, yours faithfully, (signed) T. R. HULBERT.

7. Another case of a high-priced compound manure was furnished by Mr. George Neve, of Sissinghurst, Staplehurst, who sent a sample of manure for analysis, and asked whether it corresponded with the following description, which is a copy of the card enclosed in Mr. Neve's letter:—

TO HOP-GROWERS.

Mr. JOHN WHITE, of Yalding,
Bega to inform his friends that he is prepared to receive orders for the Celebrated

CONCENTRATED HOP - MANURE, No. 1.

Manufactured by the Agricultural Manure Company, of London.

The value of this manure is so well known, having been largely used in the hop-growing districts for many years that it needs no further recommendation than that afforded in the continued and still increasing demand for it each season. It contains all the necessary elements required by the plant, has a large percentage of soluble phosphates, and about 25 per cent. of pure salts of ammonia. The extreme solubility of this manure renders it readily effective. It is considered one of the best and cheapest dressings for hops ever introduced, and is far better adapted to the purpose than either guano or rape dust.

On analysis the sample sent by Mr. Neve was found to contain in 100 parts:—

Moisture	14.05
*Organic matter, water of combination and salts of ammonia	36.65
Monobasic phosphate of lime	10.53
Equal to tribasic phosphate of lime rendered soluble by acid	(16.48)
Insoluble phosphate	7.04
Sulphate of lime and alkaline salts and magnesia	26.24
Insoluble siliceous matter	5.49
<hr/>	
*Containing nitrogen.....	100.00
Equal to ammonia	3.75
Equal to ammonia	4.55

This manure, therefore, is mainly a mixture of superphosphate and decomposed wool-refuse. The statement that it contains about 25 per cent. of pure salts of ammonia is incorrect, nor does the manure contain a large proportion of soluble phosphate, for 16½ per cent. is not a large proportion of soluble phosphate. If the whole of the nitrogen is calculated as ammonia, the manure would yield 4½ per cent. of ammonia; but the nitrogen is not all present as ammonia, but partly as ammonia salts and partly in the shape of nitrogenous organic matter (decomposed shoddy). Even assuming that the 4.55 per cent. of ammonia was present as ammonia salts, which is not the case, this would correspond only to about 18 per cent. of sulphate of ammonia.

£10 a ton cash (the price at which the manure was sold) is in Dr. Voelcker's opinion a very high price to pay for this article, as a manure fully equal to the sample sent can be readily made, with little trouble, at about £7 a ton, by mixing a good superphosphate with decomposed shoddy and a little sulphate of ammonia.

Mr. Neve subsequently wrote to Dr. Voelcker as follows:—

"In the case of the Concentrated Hop-Manure that you analysed for me some time since, Mr. Sibson, who made an analysis for the manufacturers, confirmed yours as closely as possible, but valued it at £9 per ton. I declined to take it at that price, and it has been returned with all expenses paid."

Mr. DENT also reported that the Committee had considered what interpretation should be placed upon the schedule of members' privileges of chemical analyses in cases where landlord and tenant were jointly interested, and where the secretary of a co-operative association claimed the advantage of his membership for obtaining analyses of manures and feeding-stuffs to be supplied to its members. The Committee resolved that the chemical privileges of members of the Society should remain as at present, and that secretaries of co-operative societies for the supply of artificial manures and feeding-stuffs be regarded as persons engaged in the sale of substances sent for analysis. This report was adopted after a conversation, in the course of which,

Mr. AVELING stated that the two cases mentioned in the report were, in his opinion, both equally of a trading character. He regarded, however, the charges for analysis as so heavy that they were practically prohibitory to per-

sons of small means, and therefore prevented such farmers from using artificial manures, because they were not in a position to obtain a guarantee of their quality. In his county he knew it was not unusual for a man to exchange a horse or a pig for a certain quantity of artificial manure, and therefore the cost of analysis bore too high a percentage to that of the manure to persons who obtained manures in such small quantities. He would prefer that the Society should have its own laboratory, and that analyses should be made at a low rate, not only for their own members, but for all farmers, even if the Society lost a certain amount of money in each case.

Mr. BOWEN JONES pointed out that this plan would restrict considerably the number of members of the Society, and thus prevent it from doing much of the good work that it was now able to accomplish.

Mr. DENT remarked that he should like to see the Society in possession of a good house, with a convenient laboratory, if the Society possessed the necessary funds, but that was a question which would have to be carefully considered by the Finance Committee.

Mr. RANDELL stated that he had, years ago, suggested to the Chemical Committee the desirability of revising the cost of analyses, so as to get farmers into the habit of resorting to that check upon the quality of the goods supplied to them, and this he had thought should be done by supplementing the fees which the members paid to Dr. Voelcker by an addition from the funds of the Society.

EDUCATION.—Mr. DENT reported that the following six schools had entered 82 candidates for examination for the Society's Junior Scholarships, viz.:—Devon County School, 1; Dorset County School, 2; Bedford County School, 2; Sandbach Grammar School, 3; Glasnevin College, 5; Surrey County School, 19; of which the Dorset and Sandbach Schools send up candidates for the first time. The usual examiners had agreed to act, and the gentlemen invited had accepted the office of Local Secretaries. The Council gave notice that at the next Council meeting they would move for the renewal of the education grant for 1878. This report was adopted.

VETERINARY.—The Hon. W. Egerton, M.P. (Chairman), reported that there were twelve candidates eligible to compete for the Society's veterinary prizes and medals, of whom six had already entered their names for competition. Dr. Burdon Sanderson had reported on the experiments as to the protective value of the mode of inoculation for pleuro-pneumonia employed at the Brown Institution. Four of the inoculated animals had been exposed to infection by co-habitation for many weeks in the same stable with other animals suffering from the disease, and the result was so far favourable that none of them had taken the disease. He, however, deprecated the drawing of any conclusion on the subject until much more extensive experience had been gained by further trials. Although Mr. Duguid had done his best to obtain opportunities for such trials, he had hitherto experienced the greatest difficulty in finding persons who were willing to allow their sheds to be used for the purpose. There

was reason, however, to hope that, these difficulties, like others which had been met with, would be surmounted, and that in another month it would be possible to present to the committee a final report on the important question under investigation. Dr. Sanderson had further stated that Dr. Yeo, of King's College, had almost completed his investigations, and that his report would be ready for presentation in a few weeks. In case it should be thought proper to continue the scientific inquiries at the Brown Institution, Dr. Sanderson suggested that in addition to any further experiments that may be necessary on the subject of pleuro-pneumonia, attention should be directed to the important subject of Anthrax. In reference to this disease much new information had lately been gained by scientific experiments in Germany, which, if pursued in this country, would, he believed, yield very valuable additions to our knowledge of the nature and origin of diseases of this class. The Committee gave notice that at the next Council meeting they would move for the renewal of the veterinary grant for 1878. This report was adopted.

BOTANICAL.—Mr. Whitehead (Chairman) reported that the Consulting Botanist had examined various samples of clover seeds and permanent grasses, and that these were generally good specimens. The Committee had had before them a communication respecting the condemnation in his annual report for 1876, of seeds offered to a member of the Society by a Farmers' Supply Association, in which these seeds are admitted to have been a sample of inferior cocksfoot. The Committee were of opinion that this explanation more than justified Mr. Carruthers's report. There had been several entomological inquiries made during the past quarter, chiefly in relation to insects found in potato fields. This report was adopted.

Mr. JACOB WILSON moved the following resolution, of which he had given notice.—

"That this Council would respectfully urge upon the Government the desirability of taking, as soon as possible, the necessary steps to carry into effect the recommendations of the Select Committee on the cattle plague and the importation of live stock."

He reminded the Council of the steps which they had taken during the year in consequence of the outbreak of the cattle plague, commencing with their resolution passed in March last, which was as follows:—

That seeing the precautions hitherto adopted for the prevention of outbreaks of rinderpest and other contagious diseases of animals in Great Britain have not been successful, it is the opinion of this Council that nothing short of the total prohibition of the importation of live stock from European ports will meet the exigencies of the case.

In consequence of the increasing gravity of the position and the continuance of cattle plague, uniform and compulsory measures throughout the country were also advocated; and in May, on the Cattle plague extending to Willesden outside the metropolitan area, a further resolution was passed, urging the Privy Council to supersede the local authorities in the home counties. These

resolutions were backed by deputations to the Lord President of the Council, and on every occasion practical results had followed from the action which the Council had taken, although the Lord President felt that he could not do all that was asked without further powers and further information. A Select Committee of the House of Commons had therefore been appointed; and although the report and the recommendations made by that committee did not go the whole length of what had been asked by the Council, they went far enough to merit the warm support of the agricultural community. He felt, however, that the Society ought not to stop there, as these conclusions of the Select Committee were at present only recommendations, and the question arose—Would the Government give effect to them, and make them the law of the land? He thought that it was only proper that the opinion of an important body like the Royal Agricultural Society should be expressed as to the propriety of this step being taken, and he believed that every other agricultural association in the kingdom would act in the same manner. The question was of national importance, more especially to the consumer, who was beginning to find out that "cattle disease" was synonymous with "dear meat." Notwithstanding the prohibition of German, Russian, and Belgian Cattle, the supply to our own markets was now amounting to a glut, and the producer could not obtain more than from 8s. to 9s. per imperial stone, but whether the butcher or the consumer reaped the benefit of these low prices he was not in a position to say. He concluded by urging that although it was an unusual course for the Society to petition the Government, and although the recommendation of the committee did not go to the extent which the Society had asked, he felt that the agricultural interests of the country would be satisfied if these recommendations were to take effect without unnecessary delay.

Mr. BOOTH seconded the resolution. He had attended most of the meetings of the Committee, and could testify to the zeal which its members had displayed in endeavouring to bring out the truth with reference to every branch of the subject, and especially as to an adequate provision of food for the people. He had always urged for stronger measures than those recommended by the Committee, but inasmuch as it has been stated by eminent veterinary surgeons that if animals from Germany, Russia, and Belgium could be kept out of the country, and those from other countries could be slaughtered at the port of landing, both cattle plague and pleuro-pneumonia would be prevented from gaining access to our flocks and herds, he had somewhat altered his views; and he hoped that the Government would make the recommendations of the Committee in their entirety of the law of the country, and thus secure the advantages of increased production, both to producer and consumer, by giving security for the health of their own herds.

Mr. DENT, although he would not oppose the resolution, stated that individually he did not agree with the

report of the Committee. No doubt there would be ample discussion in Parliament, where every interest is represented, before the recommendations of the Committee would be made law. He agreed that cattle from Russia, Germany, and Belgium ought to be excluded, and he did not understand why Austro-Hungary had not been placed in the same category, as cattle from that empire could be sent here by way of Trieste; but as regards Spain and Portugal, and other countries which were free from disease, he did not see any necessity for slaughtering their cattle at the port of landing. He considered that the stringent regulations recommended by the Committee to be enforced in the interior of the country would be disliked by farmers, except, perhaps, by the owners of valuable herds. As a magistrate, he could testify to the fact that when stringent regulations were in operation, cases of infraction of them were constantly being brought before him, and the delinquents were generally the smaller farmers and graziers.

Mr. HORLEY cordially supported the resolution. Nothing that the Council had done of late years had given more general satisfaction than their action this year in reference to cattle plague, and he hoped that the Council would strongly urge the necessity of immediate legislation on the subject.

Mr. BOWLY also supported the resolution, and urged that the great losses which had been sustained in consequence of cattle plague should outweigh the inconvenience to which salesmen and petty dealers were put by stringent regulations. The public were beginning to learn that the importation of live stock, so far from cheapening meat, had a directly contrary effect, in consequence of the losses of our own cattle by imported disease.

Mr. CHARLES HOWARD repudiated Mr. Dent's idea that the restrictions advocated would be of special value to Shorthorn breeders. During the last great outbreak there were proportionately fewer deaths amongst the pure herds than amongst the commoner kind of cattle. In fact, it is the graziers who complain most of the ravages of contagious diseases; and although the agricultural interest is the one which the Society was established to support, he would recommend the adoption of the resolution in the interest of the community generally.

Mr. MARTIN, as one of those who did not possess one of the valuable herds to which Mr. Dent had alluded, was a warm supporter of the resolution. All shades of opinion were represented on the Select Committee, and he looked on their recommendations as a compromise. He thought, therefore, that the Society ought not to sacrifice the opportunity of obtaining improving legislation, although the Committee had not gone to the extent which the Council desired. His experience as a magistrate was that dealers and butchers were the offenders against regulations having for their object the prevention of contagious diseases of animals.

The Hon. W. EGERTON, M.P., as a member of the Committee, stated that the recommendations of the

Committee were not a compromise. On the contrary, he regarded them as strong, stringent, and decisive. The last paragraph, it was true, was carried against the Chairman, and doubtless some thought that it would prevent the Government from taking any action in reference to foreign cattle, but he trusted that the Society would urge the Government not to be afraid of the effect of that paragraph, and that they would uphold the necessity of restrictions on home stock as well as on foreign stock, and press the Government to introduce a large and comprehensive measure on the whole subject.

Mr. RANDELL, as representing the class which, according to Mr. Dent, would not like the restrictions just alluded to, and as having to do with the occupiers of 40,000 acres under similar circumstances, declared that they had the same strong feeling upon the necessity of proper regulations being made as to home stock, and upon doing away with the importation of live animals and substituting a dead-meat trade, as the owners of high-bred stock. In his opinion, the only way to meet the increasing competition of America was by breeding more animals, and this they could only do if they felt that their stock had ceased to be subject to periodical attacks of imported disease. Farmers, so far as he knew them, would cheerfully submit to regulations themselves, if they were accompanied by such security as they desired. He did not look upon the report as a compromise, but as the result of an arbitration between the farmers and the consumers, after a most careful, patient, and exhaustive inquiry. He hoped the Council would be unanimous in asking the Government to carry the recommendations into effect, and thus set an example to the other agricultural bodies, which, doubtless, they would at once follow:

The PRESIDENT regretted that Mr. Dent had laid such stress upon the feelings of owners of valuable herds. For himself he could say that he had entered into the question more on behalf of the cotter with one cow, or the small farmer with five or six, than on behalf of the rich owner of a valuable herd, for the small man could not afford the loss of his one cow so much as the Shorthorn breeder that of his entire stock; and throughout the whole of the proceedings the bearing of the question upon valuable herds had not been brought prominently forward. Abundant evidence had been given to shew that the falling-off in the breeding of animals revealed by the statistics was caused by the fear of contagious diseases, and therefore the more the dead-meat trade was encouraged the better, as it removed the necessity for the importation of the live animals which brought these diseases with them.

The resolution having been put to the vote, it was carried unanimously, and the President was instructed to ask the Prime Minister to receive a deputation from the Council in support of it during the period of the Smithfield Show.

A letter was read from the Secretary of the Meteorological Office in reference to agricultural statistics of the weather, and was referred to the Botanical Committee.

of things were not unapt to get built up gradually on the painstaking estates to be of a very useful and oftentimes good-looking type. There was a far greater likelihood of a *uniform* lot (however compounded) existing in a neighbourhood *then*, when the limits of travel for purchase or sale were confined to the local markets and fairs, than there is nowadays, when every train brings in from a distance a medley importation, to be scattered broadcast through the district, upsetting alike (when used to breed from) all previous shape and calculation. To follow up this bull-calf, however, he did such evident good that after being used for some years and oftentimes upon his own stock, his happy owner was inspirited to try his luck in the like line again, and have another youngster from the North-country, who in his turn got similarly used, and multiplied his predecessor's performance. So it went on until a good quantity of Shorthorn blood (whether indifferent or excellent, as might be, at its source) came to be intermingled with the ordinary cattle of the district, and initiated that general improvement of which, thanks to such pioneers and by subsequent help of railway transport, so many tenant-farmers' herds show ample proof to-day. The ambitious tenant, of whom fortunately there are to be found a few everywhere, would take pains in pairing and sifting, until eventually he found himself in possession of a tidy cow, having four pure crosses or so of these imported calves' blood. From her he would breed a bull to use, and felt consequent pride in having an entry of him made in the Herd Book; and his cows he would send, as well as he could, to as many various bulls (without regard, remember, to any particular strain or tribe) as he could reach. Thus, in one way, long years since, at the beginning, cattle in the Midland and Southern counties got their pedigrees *indiscriminately* built up. Then (and even yet there are hundreds who, at the auctions, now so frequent, justify and follow this course) a bull-calf would be purchased simply because considered to be personally good, and without any calculation as to how his blood might suit that already in the veins of the female. Thus were and are "indiscriminate" pedigrees compounded, which the skilled breeder nowadays is too wise to adopt; and animals of this sort occurring very numerous in sales, and being little in demand, it is that leads usually to a low average. I venture to repeat advice I have often penned. Never buy for breeding an animal unless you can read at once in his pedigree the *familiar names of the best old cattle* and the *most celebrated breeders*. To attain that knowledge master the easy details of the first volume of the Herd Book, and read up the writings of The Druid, Messrs. Housman, Carr, Bell, &c., in fact any literature of credit giving details of the early experiments and modes of crossing adopted. This advice was given before and sneered at by a writer whose proved ignorance is only equal to his ill-nature, and whose self-conceit got, not so long since, a practical rebuke from the very public he had sought to gull, his *indiscriminately* bred cows fetching just butchers' price at the very sale where females of

a line he crabbed were sold at an average of nearly three hundred, simply because the public could recognise their elements, and trust the judgment of their breeder. As regards the question of "rampant fashion," the leading tribes, which are acknowledged to have done so much good in improving ordinary herds, must, by the law of supply and demand, keep up their price so long as the rich landowners are emulous of nursing such "blue blood." Happy fact for the country at large! But at the same time it is evident that the *line of fashion is elastic*, provided only that fitting letters of credit can be presented in the shape of an easily-read pedigree backed up by strong personal merit, as has more recently been shown in the case, to name but two, of the Darlington and Duchess Nancy tribes. But of this more anon.

Many years ago, waiting in Rome through the long hours of the night to view a ceremonial, a stranger behind asked me, "Would you like a cup of tea?" "Ah! wouldn't I?" Whereupon he handed me a lozenge, which, considering our non-acquaintance, and in a land of poison, I imprudently sucked. All at once, and so oddly, it seemed to give way between my lips, to expand and swell and soften, and finally permeate my whole mouth and throat with the fulness and delicious refreshment of the coveted cup of tea. So do I find, more and more, the oftener I study it, Mr. Housman's brief pamphlet on "The Improved Shorthorn" (Ridgway) to melt from its hard small shape into a very volume of valuable instruction. Why will he not issue another?—VIGIL, Nov. 2.

The question of breed and breeding, what it is and what it is to be, is coming of necessity more to the front each year that progresses. The love of Shorthorns, once taken up, daily experience shows us to become thoroughly ingrained in the mind of the breeder. It is no matter of enthusiastic fancy, as some would have us believe, to be taken up or thrown away as a whim. The records of over a century now sufficiently exhibit to us the hold this interesting and socially useful pursuit takes of all who have the opportunity and means to do it justice. Major Hallett's selection of seed, by the exceeding benefits distributed parcels have done in improving the sample throughout the country, afford us an illustration of the good their enterprise has effected who have devoted thoughtful years and much money expenditure to the development of the meat-growing and milk-producing qualities of cattle. Their story is on every side of their abode, and their influence reaches to foreign lands. Distinguished breeders, born artists in their line, such as the Messrs. Collings, Bakewell, Ellman, &c., we have had for generations, but within the last thirty years, whether owing or not to the increased facilities of rapid transit and mutual interchange of experiences, such a leap has been taken in the improvement of all sorts of farms, sheep, pigs, horses, cattle as one would think has almost reached the limit of possible extension. Why, it seems but yesterday that, excepting here and there an inferior specimen of

the Berkshire, only gaunt, native, hungry swine were to be seen in fold or showyard: whereas now, on the very hill-side, in the cotter's sty, you may encounter plump specimens, both black and white, of a very improved sort. It is so, too, with cattle. It is not a score of years since we have seen heifer-class prizes won by half-bred Ayrshires and Alderneys, to compete for which now we have all but faultless Shorthorns sent hundreds of miles. It is, of course, beyond doubt that the early breeders had specimens equal, at least, if not superior, to the best exhibited nowadays, but the benefit had not diffused itself through the country as it has now. So far from being sassy, as he is now, and choosing only to have the most mellow-handling roans, the ordinary grazier and milk farmer was content with a very hard-skinned, three-cornered stripling of a bull, bred and picked up anywhere and anyhow, only provided the price did not exceed as many sovereigns as a tailor's thimble might contain. It is a fact that there has been a wonderful growth of improvement, and that the taste for fine stock not only fastens itself deeply in the mind of the rich amateur, but, so far as he can reach, of the ordinary tenant-farmer too. With a view to meet this demand, men have been using up what material they could find, and while some have been content to go on with haphazard combinations of animals bought anywhere, with pedigree, if possible, only estimated by its length, and not by its elements, breeding often successfully for the butcher and dairy, but still not somewhat managing to win the confidence of the country as evinced by long prices, others have taken care to follow in the intelligent track of the thoroughbred horse-breeder, that is, to use only elements of approved excellence, and as long-descended as possible. These men of late years have obtained their reward. Those who remained deeply loyal to the leading of Booth, Bates, Knightley, &c., have found their productions in demand at high prices amongst their respective admirers. But when these purchased specimens *get dispersed*, what then? By help of patience and a long purse a new herd may be reared in time by the buyer as pure as the old if he will only stick to their development in the same channel; but this he is occasionally unable, occasionally inapt to do. Some friend has a famous bull, or he will send his cow for a cross with such and such a herd, which has become celebrated in the show-yard. Upon what principle will he do it? He may go wholly for form and shape, and, as Mr. Eastwood, Mr. Wetherell, and such breeders manage ultimately to gain the confidence of the public. Or he may produce a most shapely animal that shall sweep the board of prizes, and still have "no sale" when his turn comes. How shall we account for this? People are *naturally afraid* of a recent *conglomerate*. There is no knowing what may crop up, what "sports" may occur, and life is short. They may not care to "select" anew. They want to breed with certainty. There is but one course to pursue. It is the rule of nature. Start with the best, and go on improv-

ing. It is our destiny in life. It is the source of our happiness to go on, by whatever fair means we may, improving whatever may be within our power whatever the circle of our circumstances includes. Every man will do it his own way. Let him do his best honestly; the result in each issue will be diverse, but it may be equally a solid benefit to the community. As regards live stock, pick the best you can to begin with. I give you credit for having mastered the easy rules of "judging," and if it be but a heifer, a score of sheep, or a brood mare, stick perseveringly to the development of your idea, and you are sure to excel in the end. Don't go shifting; keep your eye ever watchful, and study carefully shows, and the prize-winners of the already successful. Buy of the *oldest possible blood*, because there is every reason to expect that it will prove prepotent. The Arab head and croup, the fiery Welsh temperament, the deep substantial frame of the Galloway cow, the yellow tint of the Guernsey cream, they will work their way to the surface, they will tell their tale eventually, as surely as the buried mole. I have been damming up a deep-banked brook to make fish-ponds, and one day a neighbour's shepherd came to look on. Their flock is a kind of Cotswold, mine the pure Babraham Southdown. I asked him of the fortunes of his flock. "They were good," he replied—but infinitely the ripest lambs are a dozen or so got by a ram of mine, of whose escapade I now learnt for the first time. And it was so odd, he remarked, that they all followed the sire, and they found, too, he further informed me, that some ewes of my sort bought at a sale and put to their Cotswold tups, followed the dams in shape and character—"weighty, such legs of mutton," &c. Here was casual testimony to the prepotency of an old unmixed breed; for my flock has never had a cross since the Babraham sale. They are small from in-breeding, and sweet, but used upon another *less ancient* conglomerate how *their excellence expands*. Again, to take another instance, despite all recent endeavours of the enterprising in pig manufacture, the most beautiful and successful white ones in England at this moment trace to Lord Wenlock's small breed, which was matchless well-nigh thirty years ago; and the exhibitor of blacks would give anything in reason to recover the head of Northey's boar, who was in his glory over a score of years since, and to whom the all-victorious Black Suffolk Diamonds trace. See how certainly, too, even as a bad penny, do the black spot of Castrel and the white hairs of Sir Hercules return, even to the tenth generation, on the flank and tail of the thoroughbred horse. Finally, then, select, if you can, of the breed that is acclimatised in your district. Strengthen it by infusion of what blood you find, on study, suit best; or, if you be imaginative, calculate a cross for yourself, keep pairing within a narrow circle so long as no symptoms of physical infirmity shows itself. Select continually the best specimens developed, and keep weeding out the weak: so, with ordinary luck, you will do as all other distinguished improvers of stock have done before you, you will justly win a name, you will supply the market with new stuff, and you will fill up your pockets with money—at least if you cannot thus you will no other way. But, in the first instance, do not go too far afield. To begin with, get as high as you can upon the shoulders of the generation before you. Then be plucky, persevering, and prudent.—VIGIL, 19th.

KING'S ROYAL COGGESHALL ROOT SHOW.

The Annual Root Show of Mr. J. K. King seems to increase in interest every year, and the good people of Coggeshall were on Nov. 13, attracted to the stores of their enterprising townsman by a large and emblazoned carving of the Royal Arms, which had been placed over the counting-house as an outward and visible sign of the Royal patronage with which Mr. King's seeds have been favoured for the past three years. The Show was held in the large building on the gravel, as before, and was in all respects a good one. There were 14 classes in which prizes were offered, varying in value from five guineas downwards, and the classes were generally well filled, in some cases commanding special prizes, on account of the extra merit of the roots exhibited. The chief feature this year was the very extraordinary size and quality of the seeds and turnips, which have been favoured with suitable weather at the expense of the mangel, the latter having been short of sun. Though smaller than usual, however, the mangels were excellent in quality. The whole of the roots, it will be understood, are the produce of seeds supplied by Mr. King, who has for many years devoted much attention to the cultivation of fine stocks, reducing the operation, in fact, to an art, in which he has been eminently successful. The specimens, with two or three exceptions, were of uniform shape, and marvellously symmetrical, with an absence of those straggling rootlets which exhaust the land without producing any adequate return in the shape of food, as is too often seen in the case of inferior stocks. King's Champion Orange Globe mangel was the principal class, and was a very strong one. The remaining classes and the prize-winners in them will be found in the list subjoined. A new kind of mangel, King's Orange Tankard, was exhibited (not for competition), and a beautiful stock it is, capable of producing a great weight per acre of finely-fleshed roots. King's Unrivalled Purple Top Swedes is very properly so named, and the numerous entries of large and excellent roots were a treat to see, as were also the Skirving Swedes, the Pomeranian White Globe Turnips, and the Imperial Green Globe Turnips, a most useful variety. Besides these specimens entered for competition, roots were sent for exhibition only from the Queen's and Prince of Wales farms, and upon two stands were arranged a variety of specimens of all kinds, including Mammoth long red, globe, and yellow mangels, red tankard turnips, Lincoln red turnips (both new varieties), drumhead cabbages and Savoy's of prodigious proportions, and samples of potatoes and other most excellent roots grown with the aid of Odam's manures, occupied by Mr. W. King, who offered a five-guinea cup for the best 12 roots of globe mangels grown with the aid of such manures.

The judges were: Mr. E. Catchpool, Feering Bury; Mr. J. Smith, jun., Pattiswick Hall; and Mr. J. Moss, Messing:—all undoubted authorities, whose awards were such as to give every satisfaction.

An elegant luncheon was provided by Mrs. King, to which about 150 gentlemen sat down. Mr. Catchpool presided, faced in the vice chair by Mr. Beaumont.

PRIZE LISS.

Orange Globe Mangel.—1, Mr. J. Byford, Stebbing; 2, Messrs. B. and R. W. Dixon, Wickham; 3, Rev. Canon Tarver, Stisted; highly commended, Mr. J. Cornell, Bay-

thorne Park; commended, the Right Hon. Lord Rayleigh, Terling.

Yellow Globe Mangel.—1, Trustees of Mr. R. W. Hall Dare, Wennington; 2, Mr. J. P. Pledger, Little Baddow; 3, Lord Rayleigh; highly commended, Mr. William Attridge, Pleshey.

Red Globe Mangel.—1, Mr. C. Richardson, Terling; 2, Messrs. B. and R. W. Dixon, Wickham.

Long Red Mangel.—1, Messrs. B. and R. W. Dixon, Wickham; 2, Trustees of Mr. R. W. Hall Dare; 3, Mr. Joseph Norfolk, Birch; highly commended, Mr. C. Warner Little Hadham, Herts.

Long Yellow Mangel.—1, Trustees of Mr. R. W. Hall Dare; 2, Mr. W. Joyce, Little Waltham.

Intermediate Wurzel.—1, Trustees of Mr. R. W. Hall Dare; 2, Mr. Josh Cornell, Baythorne Park.

Unrivalled Swede.—1, Mr. D. K. Eason, Wimbish; 2, Mr. C. Warren, Little Hadham; 3, Mr. J. Smith, Leigh; 4, Mr. Thomas Speakman, Faulkbourne; highly commended, Mr. J. Pledger, Little Baddow; commended, Mr. T. B. Cowell, Somerleyton.

Skirving's Swede.—Mr. J. Howell, Walsingham, Norfolk; 2, Mr. W. Joyce, Little Waltham; 3, Mr. Wm. Bigg Halsted.

Heavies Swede.—Rev. R. H. Eastace, Great Sampford White Globe Turnip.—1, Mr. F. Seabrook, Coggeshall; 2, Mr. W. Joyce, Great Waltham.

Green Globe Turnip.—1, Mr. A. J. Warecker, Coggeshall; 2, Mr. Wm. Bigg, Halsted; 3, Mr. F. Seabrook Coggeshall; 4, Mr. T. Yeldham, Stambourne; highly commended, Mr. J. F. Seymour, Laton, Beds; commended, Mr. J. Crooks, Lavenheath; Mr. John Moore, Messing Mr. E. Walford, Layer.

Green Kohl Raby.—1, Mr. J. Smith, Pattiswick; 2, Mr. H. T. Hicks, Little Coggeshall.

Cup offered by Mr. W. King for roots grown with Odam's manure supplied by him.—Rev. Canon Tarver, Stisted.—*Chelmsford Chronicle*.

GRAPE GROWING.—Grape growing will never cease to attract the attention of gardeners of all classes, for the very good reason that the grape is the most generally acceptable of all dessert fruits. A melon, a pine, even a pear must be cut to be tasted; but you may take as many berries as you need from a bunch of grapes, and those that remain are as good as if you had not taken any, while what remains of a cut fruit has from the moment of cutting begun to deteriorate. Grape-growing is so largely practised and so generally understood that there is really not much to be said about it in a general way; but the ground vinery is still comparatively unknown, and those who know it well are apt to regard it as a toy. But it is of such value for practical results that we should like to see it established in every garden that is not provided with a heated vinery, and even in some of the best places it would usefully supplement the vinery proper, especially in the production of the hardiest varieties of grapes, that need only a little aid in an ordinary season. Given the ground vinery and good grapes may be ensured in any season. Then the walls that have been occupied with useless grape vines may be appropriated to fruits that are better calculated to pay a fair rent for them, and a double purpose is served in the interest of fruit production.—*Gardener's Magazine*.

THE COUNTY FRANCHISE.

Mr. Gladstone's outspoken article on the County Franchise in the current number of *The Nineteenth Century* can hardly fail to hasten the settlement of the question of the extension of household suffrage to the counties. Although not nominally its leader, Mr. Gladstone is still undoubtedly the most influential member of the Liberal Party, and his unreserved declaration that the time is come for a further reform of our system of representation will have the effect of stirring up his friends and his rivals alike. His reply to the Cassandra-like warnings of Mr. Lowe is forcible and complete. He denies that we shall be taking a "leap in the dark" by going a little further on the lines of the last reform of Parliamentary representation; and, as to the "precipice" which Mr. Lowe said we are about to tumble down, he pithily observes that "We have fallen down these precipices, and know what it is." "We fell down a precipice in 1832," he continues, "a much higher precipice than any now before us, and were greatly the better for it. We fell down another precipice in 1867, and we are, to say the least, none the worse." Every one admits that the distinction between town and country householders, as citizens entitled or not entitled to a vote, is an arbitrary one, and Mr. Gladstone asks on what ground we are asked to maintain that distinction. There is not a county householder, he remarks, who would not have the franchise if he moved into a town and dwelt in the meanest hovel there, and he thinks that they obviously have a reasonable plea for a right or privilege—call it which we may—from which they are now debarred by the mere accident of residence. "To get rid of this plea," he says, "we must put forth something in bar of it. Some answer or other must be lodged. What shall the demurrer be? Shall it be inferiority of qualification? Shall it be the essential difference between county and town constituencies? Or shall it be this: we have made one false step already; it is irretrievable; but we will not make another? Or are we to be deterred from political liberality by mechanical difficulties and an assumed necessity of an increase of the costliness, already so mischievous, of elections?" Mr. Gladstone deals with these objections successively; but want of space prevents us from following him in his argument. If we had room in our present number we should give an abridgment of his paper; but as a large

number of the daily and weekly papers have already quoted extensively from it our readers will no doubt have become familiar with the arguments used in it. One passage, however, strikes us as particularly worthy of repetition. The dispute as to whether the possession of the franchise is a right or a privilege is an old one, and in reference to it Mr. Gladstone says:—"About rights I will not argue; for the very introduction of the word is apt to have a maddening effect, and many who will teach and preach to the uttermost, and without the smallest qualification, the right of property, as if it were the eleventh commandment, seem to forget that, apart from degree, it is in kind the same as the right of franchise—that is to say, it is good for the community, and its limits and conditions are to be decided by the community, through its proper organs."

In dealing with this subject on previous occasions we have declared our conviction that, if the county householders wish for the franchise, there is no reasonable and just ground for refusing it to them unless we totally alter the principle—if it can be called a principle—on which the right of vote has been previously conferred. It is obvious to all that the possession of the franchise does not rest on fitness for the proper use of it. Unless, then, we are prepared to retrace our steps, and to disfranchise all who do not come up to some standard of political fitness, we have no excuse, on this score, for refusing the vote to county householders. In our own opinion it would be well if no one were allowed to exercise political power until he had shown his ability to exercise it intelligently; but at this time of day a proposal to restrict the exercise of the franchise to those who had successfully passed an examination in politics would be condemned as fanciful, if not reactionary. Mr. Gladstone argues, as many have argued before him, that the possession of the franchise enlarges the minds and quickens the intelligence of even the most ignorant of the people, and gradually fits them to take part in the government of this country to the advantage of themselves and others alike. As to moral, as distinct from intellectual, fitness or the franchise, Mr. Gladstone urges that the lower classes of the nation have repeatedly shown themselves to be less influenced by passion and prejudice, and more apt on the whole to take the right side on any

question of national or international importance, than the members of the richer and better educated classes. There is a great deal of force in both these pleas, though it may fairly be objected as a set-off that in nearly all countries where universal suffrage exists Free Trade is at a discount. Mr. Lowe's fear that the poor will ultimately combine to practically disfranchise the rich has not at present received any justification from the experience we have gained in this country from previous extensions of the franchise. Fortunately people do not vote in classes, and even that strange anomaly the "Conservative working man" has a real existence.

Whatever other classes may have to fear, or think they have to fear, from the extension of the franchise, we see no reason why farmers should dread the acquisition of political power by their labourers. It is the fashion just now to maintain that the interests of farmers and labourers are identical, which, although it may be true in a wide sense, is not quite conclusive with respect to the little matter of wages. As far as political questions, however, are concerned, it is perfectly true that the interests of farm tenants and farm labourers are the same. At least, we cannot call to mind any question at present before the country on which there is any conflict of interests between the two classes. It is, of course, conceivable that the labourers of town and country might combine to effect an agrarian revolution of the kind madly

recommended by a few of their present or past leaders; but the advance of intelligence is our security against anything so mischievous and unjust as this, and the general British hatred of upside-down disturbances and love of justice are others. If, then, we could be sure that the agricultural labourers would exercise political power intelligently and independently we should with unmixed pleasure see them obtain it. Unfortunately, there is no certainty of the kind. The probability rather is that, as is commonly said, the extension of the franchise to the farm labourers will—for the present at least—give more power to the squire and the parson. It is certain that the vast majority of the farm labourers neither wish for a vote nor know how to use it, and if they only were concerned in the extension of the franchise to the counties we should say there is no need to be in a hurry about it. There are, however, thousands of other county householders who both desire and know how to use the right to vote for members of the House of Commons, and who are now most arbitrarily and invidiously kept out in the cold. For their sakes, and because, on the whole, the advantages of the proposed enlargement of the constituency promise to exceed the disadvantages, we are in favour of it. Anyhow, whether we like it or not, it is sure to come, and the sooner it is agreed to the less loss of time will there be in discussing and bringing it to pass.

THE LAW OF DISTRESS.

The clear and forcible paper on "The Law of Distress as Applicable to Agricultural Holdings," read by Mr. I. O. Howard Taylor at a meeting of the Norfolk Chamber of Agriculture, and given on another page, will do much to attract attention to a subject very little considered by English farmers. It is strange that while Scotch tenants place Hypothec first, or at least second, in their list of grievances, English farmers seldom give a thought to the Law of Distress, which is the equivalent of Hypothec. It is true that in principle there is an important difference between the two laws; but their effects, when put in force, are almost identical. In one respect, at least, the English law is more harsh and unjust than that of Scotland, for under the former the landlord's claim for rent takes precedence of the labourers' claim for wages, whereas under the latter this order is reversed. Hypothec, indeed, is a legal refinement of the Law of Distress, less barbarous in principle, and perhaps for that very reason more common in usage, and

therefore more felt. As Mr. Taylor aptly observed, only the "profound good sense and unexampled moderation" of landlords, "have rendered Titanic powers enduring." If the exercise of the powers given under the Law of Distress had been common that law would long ago have been abolished. If any one doubts this, let him read the description of those powers given in Mr. Taylor's paper, and he will be convinced that anything like a common exercise of such judicial tyranny would never be long endured by the people of this country. It is very seldom that an English farmer is distrained for rent, and when he is, the extremities of harshness possible under the law are carefully avoided. But if the rarity of the infliction of extreme hardship upon farm tenants under the law shows the moderation of landlords, it also shows the needlessness of the law. English landlords can get their rents without distraining in a far larger proportion than almost any other class of creditors, and we do not hesitate to say that to no other class

of creditors would it be more unjust to give a prior and exclusive claim to payment. All creditors ought to be in the eye of the law equal, and we would not, as Mr. Taylor apparently would, make workmen any exception to the rule.

The reasons why Hypothec is more strongly objected to in Scotland than the Law of Distress is in England are not far to seek. The first is that there is a keener competition for farms in the Northern country, caused in great measure by the longer credit given for rent due, an indulgence which, in its turn, rests upon the security afforded by the Law of Hypothec. Another reason is that, through the over-competition fostered by the law, the bankruptcy of farm tenants is much more common in Scotland than in England, and the hardship and injustice perpetrated under the law are, therefore, more often felt in the former than in the latter country. Any "man of straw" is a safe tenant for a landlord under the Law of Hypothec, and as the "man of straw" has little to lose, he is as reckless in taking a farm at a high rent as his landlord is in letting it to him. Farming is a more speculative business in Scotland than in England, not only because the seasons are more uncertain, but also because where either potatoes are grown largely or much stock is kept, a little fortune may be won or lost in a single season. If good luck comes, both the "man of straw" and the highly-paid landlord are all right; and if the worst comes, the former loses little, because he had little to lose, while the latter is sure of his high rent, although he may have to take less after the disaster. In the meantime all other creditors of the bankrupt are fleeced. It is no wonder, then, that in Scotland all farmers who intend to pay their way, and bankers, merchants, and tradesmen who do not appreciate being defrauded for the sake of swelling landlords' rent-rolls and affording stepping stones to needy speculators, are strongly in favour of the abolition of the Law of Hypothec. So general is this feeling in Scotland that it is said there is not a single Scotch member of Parliament who is not pledged to vote for the abolition of the noxious law, which is upheld entirely by the power of English landlords. As we remarked at the time of the last discussion of the subject in the House of Commons, there is not a more gross stance of class selfishness than this. The Scotch people are all but unanimous for the abolition of hypothec, and even their landlords have hardly a word to say for it; but English landlords, fearful of their unjust power of distraint should go with refuse to allow the Scotch incubus to be dissolved.

The pleas for the Law of Distress are admirably

met and fully disposed of in Mr. Taylor's paper. There is no abuse so gross, no privilege so unjust, no tyranny so cruel, but it has its defenders, who are always ready to cite arguments in its favour. It is seldom, however, that the pleas for the continuance of an abuse are so weak as they are in the case under review. The one most commonly used is that if the Law of Distress were abolished rents would be demanded in advance. That is a mere *brutum fulmen*, though, like a scarecrow, effective until its falseness is exposed. British tenants are a very submissive class of beings; but their objection to paying for a thing before they have got it is strong in the extreme. To pay a half-year's rent for land before they had been half-a-year on it would be intolerable to all of them, and impossible to some. If the demand could be enforced, which we doubt, it would only be at the expense of diminished rents, as a result of diminished competition. Landlords may threaten; but they would be far too wise to put the threat into execution. Another plea for the law is that by its means industrious men of little capital are able to commence farming in a small way, and to rise in the world. Perhaps so; but industrious men have no claim to rise on stepping-stones made at the cost of others. Let the landlord who wishes to give the industrious poor man an opportunity of rising take his chance with the rest of the poor man's creditors. He has a better opportunity than any of the rest of ascertaining whether his tenant is one who can pay twenty shillings in the pound. If he cannot, the landlord who knows it exercises his benevolence at the risk of causing loss to others, though with perfect safety to his own pocket. For other pleas we must refer our readers to Mr. Taylor's paper, where they are admirably dealt with. There can be no doubt that under the Law of Distress rents are unduly enhanced, and creditors defrauded, in England as well as in Scotland, although to a smaller extent.

DIDCOT CORN EXCHANGE COMPANY. — The general meeting of this Company was held at the Junction Hotel, on October 30th, when the directors laid before the shareholders their 21st report and statement of accounts for the year ending 29th September last, which showed that this market still continues to flourish and fully maintain its attendance, which, indeed, had been greater in number than even that of the previous year. The income amounted within a few shillings to that of the corresponding period last year, whereas the expenditure was less by some few pounds. This enabled the directors to recommend the payment of a dividend of 4½ per cent. on the paid up capital of the Company, which was cordially agreed to, enabling them to increase the reserve balance £17.

AGRICULTURAL SOCIETIES.

CIRENCESTER.

THE CHEMIST'S REPORT.

The first meeting of this Chamber for the session 1877-8 took place at the Ram Hotel on Oct. 29, the president, Mr. Edward Bowly, in the chair. The business of the day was to receive the report of Professor CHURCH, which proved an interesting and valuable document, of the past year's proceedings in this department of the Chamber's work. During the year 76 analyses had been made for members of the Chamber, which number was five less than in the previous year, but 85 more than in 1874. There was a considerable variety, as well as a large number of different things, submitted for examination. Noticing experiments on linseed cake, he said there was only one single instance of adulteration, but none of the makers were careful enough in the manufacture of that article, as they permitted too much sand and other un-nutritious substances to find their way into the cake. In cotton cake there was found to be too much indigestible fibre, which should be ground rather more finely than at present, as it was likely to, and did, form large substances in the intestines of cattle and produce illness. Nothing very unusual was found in the samples of water analysed, but the majority were quite unfit for drinking. One sample, strange to say, was contaminated by gas refuse. Water from a couple of cattle ponds was of the filthiest description, and had a residue of 300 grains per gallon, instead of about 20 usually found in the water of this part of the country. Some deaths of cattle were distinctly traceable to the use of this foul drink, and no wonder. In artificial manures, the great field for fraud and adulteration, he still found glaring attempts at robbery, and the farmers still needed great care in this department of their transactions. Purchase by analysed samples had already worked wonders, and that system should be adhered to. Mixed and specially prepared manures were the least easily condemned, and here a farmer had to pay dearly for the work and skill of mixing. The constituents and value of samples were given. One specimen of this description of artificial manure was found to be so bad that its use positively impoverished the land—the more a farmer used of it the less good would he get from its use. Its constituents were rotten wood, broken brickbats, and an immense proportion of sand—altogether making 97 per cent. of matter practically useless for the nutrition of plants. Dear at 10s. per ton, it was sold at £6 15s. Nobody who knew what he was about would think of giving 5s. per ton for such stuff. Yet one man the speaker knew bought five tons at once, and unfortunately took the agency for the article until he found out its quality. A sample of the material was handed round to the members, and regret was generally expressed that the name of the makers could not be publicly announced. Experiments in root growing had afforded some practical lessons, and showed that the thinness of soils here did not permit of heavy dressings to produce corresponding great crops, especially where the land was in good condition. A rotation of manuring, like a rotation of cropping, may be beneficially adopted. Different systems of manuring showed different benefits. To them local experiments were more necessary and more valuable and more interesting than those which partook of a national importance.

The flesh-forming properties and value of different roots and other feeding products were touched upon, and recent analysis was said to show that in time past their value had been greatly over-estimated. Professor Church closed his report by giving the result of analyses of different samples of butter. He believed that in time the farmers would have to deal with and compete against an enormous mass of imitation butter, and it behoved them to see its character. The United States, France, and England now supplied the article for the market, and where it was sold under its proper name perhaps no great harm was done and no complaint could be made. In the samples analysed he found horse fat, beef fat, fat from bones, and waste fat, such as that principally used for the making of candles. In Paris this artificial butter was openly sold. Here it was mixed with the true butter, or sold as such, when not a particle of true milk butter fat was to be found in it. Farmers should see that their valuable production was not damaged by less valuable mixtures, or mixtures which may even prove injurious. A short discussion followed, and a hearty vote of thanks to Professor Church terminated the proceedings.

NORFOLK.

THE LAW OF DISTRESS AS APPLICABLE TO AGRICULTURAL HOLDINGS.

A meeting of the above Chamber was held on Saturday Oct. 20th, under the presidency of Mr. R. T. Gordon, to hear a paper read by Mr. I. O. Howard Taylor on the above subject. We copy a slightly abridged report from *The Norwich Mercury*. After a few introductory observations, Mr. TAYLOR said: The aim of this Paper is to give an outline of the law of distress, proving its feudal origin, its extra judicial and exceptional character, and detrimental extension, and to indicate various evils it leads to. I shall also explain and comment upon the landlord's priority, and fairly state and boldly meet many arguments whereby distress is supported, contrasting, here and there, Scotch law, showing that various defences of hypothec do not avail distress, and that hypothec is more consistent with principle. The changed conditions of agriculture since the origin of both laws; the practical difference of their working in urban and rural tenancies; the amendment of the law of hypothec and that of distress as to lodgers will be referred to; and I shall conclude with some suggestions and observations.

What is distress? Law books define it as "The taking without legal process cattle or goods as a pledge to compel the satisfaction of a demand, the performance of a duty, or the redress of an injury." For the purpose of this Paper it will be needless to consider distress by lords of manors for quit rents, distresses for poor rates, seizures by mortgagees under after-ment clauses in mortgages, and after notice to tenants, and those for damages by stock trespassing. I shall confine myself to distress where land is hired and rent not paid. The right may, perhaps, briefly be described as a power the landlord enjoys without action and without notice immediately rent falls into arrear, set-off notwithstanding, to seize the property of his tenant, sometimes of a stranger, to ensure payment. Elaborate disquisition on the law of distress, though "a point of great use and consequence," would be quite out of place in this

Chamber. A few salient points may be usefully noted. The right to distrain attaches, independent of statute and agreement, to every actual tenancy at a fixed rent. The landlord can by express agreement postpone it. It may continue, while there are goods distrainable, for not less than six years. It may and generally does go with the ownership. It may be resorted to notwithstanding the tenant's bankruptcy, although then available for one year's arrears only. It cannot lawfully be made after tender; nor after sunset before sunrise. Some chattels are wholly exempt, others conditionally privileged, viz., supposing there be sufficient to distrain on besides. Several things not distrainable at common law have been rendered so by statute—notably growing corn and loose corn or hay. In the absolutely free list are fixtures (because annexed to the freehold), things in actual use (because of danger to public peace), goods in the custody of the law (because of repugnancy), and animals *feræ naturæ* (as not the subject of individual property). Free also from distress by the innkeeper's landlord are cattle and goods of temporary guests at an inn (for the safety of travellers), and from distress for rent due from a public trader, such things of others as are delivered to him in connection with such trade (for the advancement of trade and general good of society). In the conditionally privileged list are beasts of the plough and sheep ("in favour of husbandry which is so great an advantage to this nation," to use the words of L. C. J. Walles in a leading case more than a century since), tools, implements, and instruments of trade or vocation (to avoid destitution), and strangers' chattels, if placed on the tenant's land with the owner's actual or implied ratification of his right (to prevent an obvious fraud). A multitude of minute and subtle distinctions regulates the application of the above exemptions. As a general rule, all chattels of the tenant or strangers upon the premises are liable: the right exists in respect of the place rather than the person. Growing crops (formerly on the Common Law free list) have become liable through statutes leading to many remarkable decisions, which should be examined in each instance practically occurring. The liability of agisting stock was established long ago. To the purchasers of growing crops from a tenant or sheriff, I say, "Bayer, look sharp." Those who sell on credit, or send or lend goods to a tenant farmer, do it at their risk. Farming is not a public trade. Beware of putting your horses and carriages at livery. Remember that a machine is not on the free list. When your stock is moved, mind where they lie. If you buy from a farmer, care of paying before delivery. While dining with your friend, or taking a glass of sherry with him, your wine and trap may be seized in his stable for his rent arrears. Distress may be made by the landlord or his agent or bailiff authorised by warrant. A man distraining without authority cannot protect himself by a subsequent ratification from the landlord. The landlord is not responsible for unauthorised or unratified illegal acts of his bailiff. Outer doors must not be broken. The formalities of seizure, inventory, impaneling, notice, appraisement, and sale should be observed. Impounded stock fed, and before distraining it should be considered whether a forfeiture is waived by taking rent due. Clandestine removals are, to some extent, met by statute, if rent be due. Generally speaking, a distress must be made on the land after the day rent falls due on, not split, not passive, and necessarily on distrainable goods. The expenses of distress for rent not exceeding £30 are regulated by statute. Above there is no statutory scale. The origin of distress is too remote to be conclusively traced.

Legal authorities pronounce it a feudal offshoot and substitute for forfeiture. In the old time a punishment rather than a remedy, it became so formidable an engine of cruelty that Parliament was compelled again and again to intervene. Shakespeare represents Richard at Bosworth as inflaming his troops by coupling the distraining of lands with the distraining of wives. The word distress carried no pleasant association in his day. The preamble of 57 George III., cap. 93, refers to the oppression of poor tenants by excessive charges on distress by brokers. And it is monstrous that appraisers, not even professional, have frequently bought at their own valuation! A distress belongs to that small class of legal remedies designated "redress by the mere act of the parties." In the dark ages of the human race eye was eye, and tooth for tooth—the strong man kept his goods, and took and kept other men's also.

In civilised communities Courts of Justice are instituted, whereto appeal must be made. Taking law into one's own hands jars against the well-being of society, and is excusable only where legal process would manifestly fail in despatch or efficacy. Force may be used to repel violence in self-defence; goods wrongfully carried off may be peaceably retaken; and a nuisance demanding immediate removal may be quietly abated. Here the occasion is too urgent, the remedy too inadequate, for slow formalities of law. Yet these are exceptions only. "If," says Blackstone, "individuals were once allowed to use private force as a remedy for private injuries all social justice must cease, the strong would give law to the weak, and every man would revert to a state of nature." With Blackstone the law, as in his day, was perfect reason; he never wanted excuse or explanation, however ludicrous, or any anomaly. But this admired writer did not attempt to justify distresses in principle while proclaiming them highly beneficial in practice. He betrays his consciousness of the theoretical objection by observing that, in distraining, "the law allows a man to be his own avenger, or to minister redress to himself;" and by describing the proceedings as "extra-judicial and eccentric." He broadly lays down that "distress was intended for the benefit of landlords," and shows that its extension arose from the Legislature finding it "the shortest and most effectual remedy of compelling the payment of rent." Nothing can be clearer than this—distress sprang, grew, and stands for the (supposed) interest of owners. It came into being when the occupier was a serf, and became established while occupation, as distinguished from ownership, was excluded from the national councils, not only in fact, but through the form of the Parliamentary franchise. It is not only a class law, but a class exception from law, rendering the landlord, as compared with ordinary creditors, a chartered libertine. From our worst to our best Queen—from cold-hearted Mary to warm-hearted Victoria—the current of legislation set steadily against the occupier. Eight Acts, from Charles II. downwards are quoted by Woodfall contrary to the tenant's interest.

After quoting a glaring instance of Parliamentary partiality to ownership, he said that a distress, instead of being a means to a remedy, has become the remedy itself. The sale is a contradiction to the principle of return of the goods uninjured; and, in the interest of landlords (for whom the statute of George II. was admittedly passed) even a feudal privilege was enlarged. He showed that the objection to the law of distress was not merely theoretical by practical, and said that to enforce an ordinary debt the plaintiff must establish his right (unless admitted) before judge or arbitrator after the warning of process; execution, when issued, can only be enforced through

an independent responsible officer, and usually some days after judgment. How startling then to reflect that rent in arrear can be distrained for instantly, without warning—without action—without proof or declaration that it is due—and through any scratch scoundrel from the street dignified for the nonce with the title of bailiff, and in league with blackguards! Statute after statute was passed of old to check the tyranny of lawless barons under cover of distresses. Yet the law is far more comprehensive and stringent now. One is struck with admiration at the wisdom of modern British landlords! Only their profound good sense and unexampled moderation, coupled with practical sagacity, have rendered Titanic powers enduring. After showing what changes had been made in the law he proceeded—The English landlord's priority is constantly spoken of as extending to one year's rent only. But this even where creditors are interested, is most inaccurate. Between the landlord and the tenant the distress may be for half-a-dozen years' arrears. The man who becomes incapable of paying 20s. in the £ rarely stops when he crosses to the wrong side of the line of solvency. Insolvent persons sometimes keep afloat for years. The position of a landlord under distress is *not* assimilated to that of an ordinary creditor, who, obtaining execution against a trader, is liable under specified circumstances to disgorge. It is, I submit, perfectly conceivable under the present law that a tenant should, through the carelessness or misplaced confidence of his landlord, or through an owner's sinister motive of improving his property at another's cost, hold land for several years without paying a sixpence of rent, and then for the landlord to clean sweep by distress all the assets, including unpaid-for chattels and cattle existing too, chousing the labourers of harvest wages, and leaving the tenant not a change of raiment, a tool to work with, or enough to bury him with decency. It is only the *time* when the distress is put in which affects the greater or less preference—the landlord can wait while the tenant is going—going, not until he is gone. Grant that the case above is imaginary, ought it to be possible? or the law even doubtful?

Let us now deal with sundry arguments whereby distress is sought to be justified, and test their validity. First—It is contended that crop and stock have (as it were) been assigned to the landlord by way of security for the rent. The law of hypothec does imply a tacit contract, not so the law of distress. However much their results may resemble, the principles underlying the two are essentially distinct. The derivations of the words "distress" and "hypothec" indicate plainly this diversity—one is from feudal law, the other from Roman. The ground idea of distress is punishment for withholding from the lord of the soil his dues, coupled with enforced payment. The ground idea of hypothec is conferring on the owner as a creditor rights by way of security over property not in his possession. Hypothecation creates a right in a thing not to a thing—a pledge without possession of the pledge. The Scotch law presuming an implied contract, conflicts not with theory like our relic of vassalage and vengeance, not even pretending to principle. In Scotland, hypothec superseded distress through judicial decisions two centuries ago. Now if distress is to be supported by the notion of hypothetical assignment by the tenant, what becomes of the right to seize strangers' goods? Can anything be more ridiculous than that any tenant should be imagined to create a security over his neighbour's chattels present and future for the assignor's own debt, nay for his future non-existing debts, a charge shifting on or off

according to the whereabouts of unscheduled unspecific property, and without warning or consideration to the neighbour affected? Seizure of strangers' chattels on the premises demised has been upheld because "otherwise a door would be open to infinite frauds upon the landlord," and the stranger has his remedy against the tenant. Is not every creditor issuing execution open to frauds? Why should legal interpleader suffice for sheriff and execution creditor and not for the owner? Is it either just to the party or beneficial to the public that horses or cattle sent to agist should be distrainable although brought on the land without objection from the owner; or that hazard of distress should occur through a weak fence? Cattle driven to market are endangered by a night's lodging on the road; for the solitary old decision supporting the privilege has been questioned, and cannot be prudently relied on. The instances wherein the property of one is applicable for the debt of another (distress excepted) are mainly three. None, examined, resembles seizure of alien goods for rent. The first instance arises in bankruptcy—By the 15th section of the Bankruptcy Act, 1869, certain chattels at the commencement of the bankruptcy in the possession, order, or disposition of the bankrupt, being a trader by the consent of the true owner of which goods the bankrupt is the reputed owner, are rendered disposable among the general creditors. Substituted for similar provisions in previous Bankrupt Acts this section aims at preventing traders from cheating creditors by fictitious credit, through holding forth goods of others as theirs. The second instance (rebelliously relied upon as analogous to distress) occurs in maritime matters under bottomry bonds. Hypothecation, unknown to the common law, was imported into our maritime from the civil law of ancient Rome. This hypothecation is a contract whereby in consideration of money advanced for necessities of the ship, vessel, freight, or cargo is made liable for repayment provided the ship safely arrives. The power wielded by the master (who immediately represents the shipowner) of rendering the cargo responsible is founded only upon absolute necessity. Shown by the decision of the great jurist, Lord Stowell, this is conspicuous in every treatise on merchant shipping. The master ought first to endeavour to raise money on credit of the owners; if he can, he must; if he cannot, he may hypothecate. The money must be necessary for the ship, the master cannot hypothecate for his own debt. The reason why the cargo may be hypothecated for reparation of the ship is that repairs of the ship are indirectly necessary for preservation of the cargo. The shipowner is bound to indemnify the owner of the goods against the hypothecation. Repayment must be dependent upon the ship's arrival; in other words, cargo and ship must derive benefit from the advance. The lender must enforce his rights through a Court, seamen's wages taking precedence over bottomry bonds. The master can sell ship and cargo in extreme necessity, as, if the ship be wrecked in a foreign country where no money can be raised and carrying the cargo to its destination becomes impossible; so that by sale the best may be made for all. "Necessity alone," says Lord Stowell, "supports bottomry bonds; the absence of necessity is their undoing." Only the necessity of the cargo warrants the master in hypothecating the cargo. Necessity for supply to prosecute the voyage must coexist with necessity to raise advances thus because not obtainable otherwise. The third instance is the shipowner's lien for freight. The shipowner has, independently of contract, a

lien of the goods actually carried for the freight due in respect of them. It has also been held that he has a lien on the cargo for any sum by the charter party payable for the hire of the ship, although not relating to the quantity of goods carried, but calculated on the tonnage of the vessel. Freight is only a fraction of the goods value. This lien resembles that of other carriers depending on services rendered and possession; so much so, indeed, that when the owner absolutely demises the ship and parts with possession of her and her cargo he to the extent of the freight they contract to pay. The law of loses his lien. The lien exists against the sub-freighters only reputed ownership, therefore, proceeds on policy for general creditors' safety. Bottomry bonds rest on neces ity and benefit to the property hypothecated, and the lien of the shipowner stands solely upon possession and service of the ship. It is astounding that tottering hypothec and distress should be shored up by such examples. Their principles are directly adverse. Apply the first—the landlord who by admitting an impecunious tenant confers on him an illusory status should lose rather than keep his rent. Apply the second—where is the necessity for seizing strangers' goods where the strangers benefit from confiscation? Apply the third—lien *non est*, the lease parts with possession, and the owner's service is *nil*. One of the most formidable considerations against the removal of the landlords' preference, and probably that which will weigh most with tenants, is the argument that if distress were abolished or greatly modified rent would be demanded in advance. If landowners in that case can, will, and must insist on advance rents, the point is serious indeed to tenants from year to year or for short terms. Prospect or probability of having to meet three half-yearly rents in one year—viz., the April and Michaelmas rent of the expiring tenancy, and rent in advance for the first half-year of the new tenancy, is enough to set a hard-pressed farmer against change; and the straggling tenant's trouble might not stop there, for although his credit would be improved through his rent being paid, and distress being impossible, it is questionable whether the new advantage would compensate him for the former use of a sum certain equivalent to half-year's rent for (usual audit dates considered) nine months. This last grace is apt, however to be over-valued. The farmer pays no interest *eo nomine* as to banker, but imagine not that he enjoys the use of the owner's money without compensation. There is an indirect, although undistinguishable, return in the amount of rent—burden and benefit, be sure, run in double harness. To tenants of capital rent in advance might present no objections, rather positive advantage; to men *minus* means it would be ruin. Were distraints abolished would English landlords demand advance rents? A course so obnoxious were, I conceive, needless, unreliable, and in the long run adverse to the owner. Demanding rent down shocks those ideas which associate rent with production. The extended period in Scotland where rent is deferred, sometimes until twenty-one months after entry, and nearly always at least twelve months for arable land, flows primarily from the view that the tenant should benefit by the crop ere payment. Unless rent in England be reserved specially, it is payable annually, so that the tenant entering at Michaelmas secures harvest and has time to sell his corn before rent is due. Conceding that in strict business owners may make the best bargain within law they can, would not a grasping of rents ere rents are usually due be regarded as legal but not legitimate extortion? And would not grave consequences issue from the step, and the influence of landlords be severely shaken? There are owners, large and small, from the proudest Duke to the humblest yeoman.

They cannot and will not act in unison, for even between owners there is a competition for tenants, and the generous landlord is always preferred to the exacting. In the second place, landowners can secure themselves against all but very exceptional losses by judicious selection of tenants, by reasonable guarantees, by well-drawn reservations and covenants, by inquiry into means, and by keeping themselves, or through agents, an eye on farm and occupier. Rarely does a farmer sink in the sea of debt without a leaky condition of his farm or its stocking, or such damage to his local credit as the landlord or his agent may easily learn. Any great change of the law of distress ought to be and might be accompanied by a more speedy process for removing defaulting tenants under the re-entry clause contained in every well-drawn lease or special enactment. Tenants failing to fulfil the essential conditions of their holding court ejection. In Scotland the occupier of a pastoral farm may be removed for not stocking, and by a statute now a century old, called the Act of Sederunt, the ejectment of defaulting tenants was facilitated. Interest, although usually paid half-yearly, accrues *de die in diem*. Rent could be reserved quarterly, monthly, or weekly, without affecting convenient audits. The periodicity of rent has no special virtue. In actions for use and occupation of land where so rent is fixed, satisfaction must be made *de die in diem*, according to the time of actual occupation. Days, too, are considered in apportionments. In the third place, landowners will be governed mainly by their interest. Other people profit by giving rational credit, why not landlords, who start so well with proof of means? Bakers trust their customers, and so do merchants. The former do not invariably insist on security or guarantee, nor do the latter refuse to sell goods unless for net cash. As a rule just debts are met. So in business it better pays to trust and be sometimes done, than not trusting to lose all whereout one can be done. Did landlords demand rent down in advance, competition for their farms would vanish, just as the business of the tradesman would dwindle who refused to deal without sight of coin. Tenants, while they can, always keep right with landlord and banker. I am well aware that before the Select Committee of Lords on hypothec, in 1869, there was a general concurrence of opinion that landlords would insist on forehanded rents if hypothec were abolished. Hypothec has induced credit beyond the legal term. Forehanded rents must not be confounded with advance rents. The abolition of hypothec would unquestionably accelerate the time for payment of rents in Scotland. But "fore rent" as distinguished from advance rent would only assimilate the position of the Scotch tenant to an ordinary Norfolk one—one half-year's rent due six months after entry, next half at the twelvemonths' end. It does not follow, then, that if the Scotch landlords, hypothec abolished, demand "fore rent," English landlords, distress done away, would anticipate their wonted audits. Another formidable argument is that if distress were abolished land would decrease in value. It is contended that the income would be less certain, while the expense of agency would be increased, and watchfulness over the tenant would diminish the enjoyment of estates by men of fortune and position. This opinion is held by many persons of such experience and authority that it deserves the gravest consideration. It does not, however, contravene removal of the offensive features of the law provided a summary remedy for rent in substance remains in force. Nor, with deference, do I share the apprehensions indicated. Nor should I regard it as a misfortune were owners of land bound to take more personal interest in its management. The extinction of one more feudal privilege clashing against nineteenth century notions, can

shake the stability of real estate, or can the elevation of the cultivator depress its value? If rents are inflated, vengeance is taken on the soil. "Rent," as quaint old Fuller said, "should quicken, not gall, and put mettle into the tenant's industry." More tenant's capital means better farming, richer produce, superior stock, live and dead, less stingy wages, and enhancement of the subject demised. No advance in human welfare is secured without loss and hurt somewhere. Things take time to right after any serious change. It seems a law of our being that general good can be reached only by the pathway of particular suffering. The true interest of the landholding class, as a class, is something very different from the immediate pecuniary advantage of all present recipients of rent. Were a Railway Company suddenly and arbitrarily to raise its rates, the *income* of some shareholders would be greatly augmented, because the alienated traffic could not instantaneously be diverted. Yet to the permanent shareholders such a course were ruin, and to the Company, as a Company, suicide. On the other hand, reduction of rates or judicious outlay may decrease the present dividend while developing new traffic and assuring a prosperous future. So were distress abolished rents might for a time be lower; land in the end worth more. Tenants with capital surely would fail less often than tenants without; and the loss here and there of a quarter's or half-year's rent would have abundant compensation all round through a more vigorous husbandry. Rent is only an element in the value of land; the soil stands; wealth grows; year by year investors search more and more for security rather than interest, and better appreciate the pre-eminent worth of visible ownership. A further argument has been pressed that if distress were abolished mortgagees would not lend at so low a rate of interest, the owners' facility for borrowing would be diminished, and the borrowed money may be (how often is it?) wanted for estate improvements. Has it struck all who urge this view that while mortgages on land are the best of securities mortgages on personal chattels are the worst? A farmer *qua* tenant practically cannot raise capital without personal confidence; he is not permitted to assign his lease as a leaseholder can. Lenders on bills of sale always risk distress and liquidation; registered it damages the borrower's credit, unregistered it is no security to a stranger creditor. More capital would be applied to land could farmers give security, and were bills of sale safe from sweeps. Could the history of Norfolk agriculture be recorded in naked truth its greatest benefactors would be found among our far-sighted bankers, whose liberality in business has merited wealth. To revert—interest on money lent depends on supply and demand, influenced by the position of the money market, the value of foreign stocks and securities, times of speculation and reaction, gold discoveries, wars, and so forth. No mortgage for an advance is effected knowingly without a margin. Every mortgage carries a power of sale in default of payment of principal or interest. Who in the world would deliberately lend so close that the loss of half-a-year's rent would jeopardise the security? Or what owner borrowing, if his tenant failed, could not and would not make up the half-year's interest rather than be deprived of his estate? "Oh," but say the supporters of distress, "mortgages are nearly always trust money, and so important is it that the interest should be regularly paid and safe, that otherwise the money would be kept in the funds, or where income is certain." It is not my experience that Norfolk loans are so universally out of trust money; but it is my experience that four per cent. is preferred by beneficiaries to three. Now the margin required for a trustee's protection lending on land is one-third. On property worth £21,000 a

trustee lends 14,000. Take the net rental to be as high as four per cent. on value, viz., £840 per annum, is it for a moment conceivable that the borrower would sacrifice £7,000 by allowing the year's interest on the trust loan (say £560) to be unpaid because the tenant had failed without a farthing in the pound? No second mortgage existing, the owner could pay or raise at once the £560 interest; if existing the second incumbrancer would discharge the interest on the first mortgage for his own protection. In either case a new tenant would replace the bankrupt. No mortgagee enters willingly into possession; entry betrays a shaky security. The abolition of distress, therefore, could not possibly prejudice any security for trust moneys on broad acres, unless the trustee had committed a breach of trust through indifference to margin. Moreover, loans for landed improvements can always be obtained from companies to which punctual interest involves no personal convenience. Again it is argued that the relations between landlord and tenant would be prejudicially disturbed. This, too, I fail to see. Subserviency is over. Norfolk landlords right nobly recognised the change, even the Government has acknowledged it. Old times called forth their own peculiar virtues. The dependence of farmers was often repaid by splendid generosity. There was an unwritten bond of good feeling between landlord and tenant, between farmer and labourer, the cancelling of which I for one deeply regret, we shall read it only in the tales of ancestry, and recall it only in recollections of our boyhood. Now the commercial principle obtains—business is business. And nothing strengthens business friendship like means to pay, punctual payment and strict adherence to contract. The occupation of farms by a tenant more able to do justice to them, with whom differences as to rent and covenants must be rare, cannot hurt unless the tenant's rise be deemed the owner's fall. It also argues that the landlord is necessarily in a position different from other creditors. A merchant entertaining doubts of a customer's solvency can refuse, it is said, to deal further, while he who grants a lease parts with the land for a term, and the right of re-entry being enforceable now by legal process only, a fresh debt accrues while ejectment is pending. It is evident that the Select Committee of the Lords on hypothec relied strongly on this point. Render the power of re-entry for non-payment of rent immediately available, like the right to take possession under a bill of sale for a debt, and this contention would drop. It applies, moreover, to leases which are by no means universal even in Norfolk. Why cannot the remedy by ejectment for non-payment of rent be accelerated where there is no defence on the merits, just as judgment under the Bills of Exchange Act, and for liquidated debts under the Judicature Act? The case would rest on a simple and single fact, is rent paid or not (altogether differing from disputes as to farming covenants) trial at assizes being needless. The landlord's position is represented as piteous, he "cannot stop the supply." Well, can a merchant who has undertaken to deliver goods at certain periods on credit stop the supply, because in the middle of the contract he doubts his customer's solvency? The merchant can decline a new contract as a Landlord can a fresh lease; bad bargain made, he must stand or fall by it. A merchant who sells on credit to one who afterwards fails may lose profit and cost price. A creditor who lends, without good security, may be done out of interest and principal alike. Not so the landlord, he always gets back his land; his worst loss with ordinary diligence, under a proper lease, cannot exceed half-a-year's rent; and the ejectment under many conditions is a positive pecuniary advantage to him as where capital or

labour put into the land by the tenant and his other creditors is appropriated. Lucky the merchant who never lost more than profit! Happy the creditor whose principal is always forthcoming! Yes, the "landlord is" in a position different from that of other creditors; and that difference is in his favour—and unique! Another argument against a change of the law is founded upon the indulgence landlords can now give to needy tenants. The abolition or great modification of distress would tend to induce landlords to scrutinise solvency, and, probably, widows and representatives of deceased tenants, as well as needy tenants themselves, might receive less indulgence than now. Let it be remembered that this so-called indulgence involves little or no risk to the landlord, while often operating insidiously against third parties. As far as my experience goes, it leads frequently to gross and disastrous breaches of trust under wills, collapse of the deceased's estate, and heavy losses to outside creditors. It is but cruel kindness to permit a tenant to go on without the requisite capital. Many a tenant has lost his all by labouring most diligently at a business for which he was not man enough. Hard as it may work in individual cases general good can best be maintained by right men in right places. Men commanding means can alone in modern farming do justice to their labourers, their landlords, the public, and themselves. That rent should be paid first, because the crop could not exist without land, is a common yet not logical sentiment. Surely the distinction between natural grass, the spontaneous production of the soil and cereals and roots, results of capital and labour, is here lost sight of. Why, if reason guides, should he who finds land rank before those who supply labour, or manure, or seed, or implements, or stock? Can any be dispensed with? Yet the owner proceeds not one bit all! The landlord's preference is also excused by the suggestion that it hurts no one because all are aware of it. The tenant's assessment can, it is urged, be referred to, and his actual or approximate rent ascertained. True, but what valuation list informs how many years the tenant is in arrear, or what his relations with the landlord? Were the landlord's lien limited to a year's rent, or less—enforceable only within a brief time—and through a Court—registered like a bill of sale or sequestration, and confined to specified chattels of the tenant, there would be more in the contention: a wrong cannot cease to be a wrong because known to be a wrong. Mr. Taylor next noticed at length the various arguments urged against the abolition of the landlord's preference and the further improvement of the law, and then went on to say the English law of distress whatever its virtues has certainly not elevated the rural labourer. What benefit is there to the hard-working but less well-to-do farmer, in a law enabling his neighbour to secure acres beyond his means, leading to farms being laid to farm, and a continuous extension of the size of holdings? Distress abolished, great and small would start fair. Farmers in Norfolk may disregard the threat that leases would contain stringent farming clauses. In Scotland there is ordinarily great latitude in leases. In Norfolk those framed by land agents are now all but impossible to abide by, more severe far than when solicitors, independent of both lessor and lessee, held the balance between clients, and, to be frank, were well paid for the trouble. The committee of the House of Lords support hypothec (and practically distress) by stating that the Scotch law follows the Roman in common with the laws of nearly all other European countries. The committee did not however remark that distress is retained in but few of the States of America, where the general spirit of legisla-

tion has been directed to placing the owner upon the footing of an ordinary creditor. In America abolition has not been followed—as a rule—by advanced rents, but accompanied by a more summary law of ejectment. Nor did the committee refer to those European countries which establish charge-taking preference to the owner; among them, the cost of sowing and reaping—not those laws limiting the time within which the landlord's right may be asserted, nor point to the marked distinction between the law abroad as regards country and town. After pointing out the changed condition of agriculture and discussing the different methods of distress in town and country, and the law of hypothec in Scotland, he proceeded:—In England the landlord, by distraining, ruins the tenant's credit and sacrifices the assets; in Scotland, by sequestration and simple inventory through a court, he can assert his charge without needless hardship. In Scotland the wages of the labourers who raise the crop take priority of rent, while the contrary dishonourable British law. Whether distress be or be not doomed, its existence unchanged in the blaze of public opinion is inconceivable.

In any reform the subject must be studied from at least four standpoints:—(1)—Of the owner entitled to summary remedy and wishing to keep his preference; (2) of the tenant desiring the present remedy and damaged by the priority; (3) of the dealers with and creditors of the tenant who object to a remedy involving, and a preference injuring them; (4) of the public caring little about either remedy or preference so production be assured.

In any revision of the law, several considerations should I conceive be not lost sight of—

- I. The law of distress, if maintained, should be rendered clear by statute on all points, especially as to what chattels are subject.
- II. The antiquated notion of punishment should be for ever abandoned; and penal and fictitious rents should not be distrained for.
- III. The distinction between the practical working of distress in country and town should be steadily kept in view.
- IV. No distress should be permitted without a previous affidavit or declaration that rent is due.
- V. No seizure in town or country should be made except by a public responsible officer.
- VI. The fees and charges should be fixed.
- VII. The time within which a distress may be resorted to should be limited to two years, or better far, one year as the extreme outside.
- VIII. The landlord's priority in and after a bankruptcy should not depend on the mere formality of a distress.
- IX. Labourers' wages, bankruptcy or not, should be preferred to the landlord's claim.
- X. The landlord should be able to attack the tenant's chattels for current rent upon proof of intended fraudulent removal before the rent is now technically due.
- XI. The landlord's power of re-entry for non-payment of rent should, where there is no defence to the ejectment, be more speedily available.
- XII. The law as to the sale by the Sheriff of growing crops should be amended.
- XIII. Stock going to and from market should be free from all risks on strangers' land.
- XIV. Agricultural machinery and implements should be further protected.
- XV. Cattle and sheep existing should not be liable beyond the *bona fide* sum agreed to be paid and remaining unpaid by the stockowner.

XVI. The measure of justice extended to Scotch tenants by the Act of 1867 and to town lodgers by that of 1871 should not be withheld from the British farmer.

XVII. In future agricultural tenancies the right of distress should never exist without contract, express or implied.

XVIII. No distress within a short fixed period before the filing of a petition for liquidation should avail preferentially for more than a year's rent.

XIX. To avoid injury and difficulty as to small tenants in the country, the size of holdings should (as in a recent Act) be taken into account.

XX. Generally, and lastly, that the whole question, especially the liability of strangers' goods, and the effect of the landlord's priority, should be reconsidered with reference to the change of circumstances—the exigencies of business—and the demands of justice.

Mr. Taylor concluded by saying, neither merchant nor dealer, nor farmer, but an owner myself, I appeal in the interest of their order to the laborer patriotism and justice of our truly British Englishmen to relinquish or purify an outdated privilege and repugnant anachronism as now offensive to the sight of wisdom and the nostrils of equity. May they take to heart the maxim of Sir Edward Coke, *cessant ratione cessat et ipsa lex*, and the counsel of the Sage, "There is a time to keep and a time to cast away."

The CHAIRMAN (R. T. Gordon, Esq.), in thanking Mr. Howard Taylor for his paper, said he was sure the members of the Chamber had never before received such an amount of legal information on the subject of distress without having to pay for it.

Mr. READ, M.P., who seconded the vote of thanks, proposed that the paper be printed and circulated among the members, that it might be discussed that day three weeks. The subject was one that must come to the front in a few years, in all probability in a few months. For years past in Scotland this subject had been discussed at Farmers' Clubs and Chambers of Agriculture, and at every contested election in counties the candidates had been pledged to vote for the repeal of the law of hypothec; while in England they had never thought of it, or if they had, they had not said much about it.

Mr. CHAMBERLIN supported the motion, which was agreed to, and the Chamber adjourned.

SHROPSHIRE.

AGRICULTURAL QUESTIONS IN PARLIAMENT.

At the annual meeting of this Chamber, held at Shrewsbury on the 19th Oct., the President, Mr. C. C. Cotes, M.P., in the chair, it was resolved that Mr. Stanley Leighton, M.P., be President for the ensuing year. Mr. Nevitt was re-elected Vice-President, and Mr. T. M. How Treasurer. After the annual report had been received, Mr. Jasper More read a paper on "The Position of Agricultural Questions in Parliament: Is it satisfactory or not?" In the course of an address which was listened to with great interest, he referred to the Agricultural Holdings Act—a measure which, he said, engaged much of their attention at the time the present Government came into power. It arose out of an expressed opinion on the part of large farmers that they had not sufficient security for their capital. Many of the landed proprietors resented that view, because they felt that farmers with capital were perfectly safe. It was, however, considered desirable that a Bill giving them security should be passed.

They knew what course the present Government adopted with respect to the question. They gave everything that the farmers desired, and full permission for them to contract themselves out of the operation of the Act. The first people to avail themselves of the permission were members of the Government, with respect to Government property. If a return were asked of those who, in their county, had not contracted out of the Act, a very small piece of paper would suffice to contain their names. This manner of dealing with the matter was certainly very singular, and could scarcely be considered a good precedent for legislation in the future. The next question was one that they used to hear a great deal about, but it had become rather unfashionable since the present Government had come into power. He alluded to the repeal of the malt-tax. Colonel Barttelot agreed to bring the subject forward in the House, but when the Government of the day changed he did not think the time was opportune; and thereupon another member, Mr. Fielding, introduced it, but was followed by only nineteen members. Greatly as he (Mr. More) regarded Mr. C. S. Read, and greatly as he acknowledged his paramount authority in agricultural questions, it did not appear that Mr. Read's conduct was perfectly satisfactory on that occasion. He expressed an opinion that it was no use then attempting to agitate for the repeal of the malt-tax, and he (Mr. More) was sorry to hear him express that opinion; but Mr. Read had fully atoned for it by his disinterested conduct in resigning his office when the Government would not carry out his views with respect to the legislation for the cattle disease. Mr. Read was now out of office, and was again a free man. Commenting lately upon a speech by the Solicitor-General, Mr. Read said that if the Solicitor-General entertained those views he hoped he would help him (Mr. Read) to obtain a repeal of the malt-tax. It was satisfactory to see Mr. Read returning to his old love, but was it perfectly satisfactory that the moment the Liberal Government went out of power the question should lie dormant? Referring to the Valuation Bill, Mr. More said he had heard two opinions expressed lately which were rather contradictory with respect to that measure and others. He heard one of their members state that he was struck with the speed with which the Government passed agricultural measures. Lord Granville, speaking, of course, in opposition to the Government, said he thought that the agricultural measures of the Government were like a leg of mutton, served hot one day, cold the next, and made a hash of at last. Whether satisfactory or no, the Valuation Bill could scarcely be considered a case of Ministerial speed. It was a Bill which was a warning to them that they must expect the disagreeable presence of a Government officer if they were to have any lightening of the rates from Government sources. Dealing with the question of local taxation, he asked whether the members of the Chambers of Agriculture were not of opinion that the towns had received a far greater share than the counties of the remission of taxes. He wanted to know what had become of late years of the question of the rating of personal property. When Chambers of Agriculture were first established, and when he had the honour of being Chairman of the Central Chamber, they had a discussion on local taxation, and there was not one of the members in the room who would listen to anything else but the rating of personal property. He pointed out at the time that it would be better to get increased subsidies from the Imperial revenue, but they would not listen to that view. After quoting from a speech of Sir George Lewis, Mr. More said that if the County Boards were established, the

only thing they would really have the full management of would be the rates, and he should be sorry indeed if the County Boards did not have a few years' grace to manage the rates, without being at once fettered and crushed down by Government officials. With respect to County Financial Boards, he had one suggestion to make, and that was, if they were to have boards, there should be one for the Northern, and another for the Southern Division of Shropshire. He left it to the Chamber to say whether they considered the cattle plague legislation to be in a satisfactory state, and whether they really thought there should be any change with respect to game and the game laws.

At the discussion held at an adjourned meeting, on Saturday week, Mr. T. L. DODGSON commented upon the value of a discussion of that sort, and urged that it ought to be conducted perfectly free of party, and with the pure object of seeking to advance what was best for agriculture. He should leave to others the task of going into detail upon several of the subjects which Mr. More had alluded to, but there were one or two to which he should like to refer. The abolition of turnpike gates had thrown a most heavy and unfair change upon agriculturists. He believed that the whole system tended to encourage agriculture by the immunity it gave to farmers in many cases. Now, however that immunity is withdrawn, and an extra proportion of the cost of maintaining the roads is thrown upon the land, he believed that no legislation could be satisfactory upon that point which did not readjust those burdens by making those who used the roads liable for the repair of them in a direct proportion to the benefits or profits they received by such use. The subject of outdoor *versus* indoor relief he knew to be a most difficult and anxious one. It often seemed very cruel and very hard to refuse outdoor relief, but the main question for the consideration of guardians, as trustees of the public money, seemed to him to be "which system had the greatest tendency to reduce pauperism," and he was bound to say that both fact and argument seemed alike to point to the indoor relief system as the best adapted to meet that end. Referring to the question of the game laws, Mr. Dodgson said if they were abolished he should expect to see a great increase in the number of absentee landlords, and to find that landed estates were more and more treated as mere investments, having no further interest to the owner than how to drain from the land the greatest amount of income at the least possible expense. He believed the Agricultural Holdings Act had been productive of good.

Mr. BOWEN JONES said: Mr. Moore, in his opening speech, first of all introduced to their notice the Agricultural Holdings Act, and he (Mr. Jones) quite agreed with the principle of that Act, but the justice of claims for unexhausted improvements being admitted, he thought it was a blot in the Bill that it had not been made compulsory. He could not, however, entirely agree with the conclusions Mr. More had arrived at with respect to its being utterly useless. He well recollected that he had the honour of being vice-president of that Chamber some years ago, when a committee of the Chamber sat for many weeks and drew up a very just scale of allowances to the outgoing tenant for unexhausted improvements. He recollected that there was a great demand for copies of the scales, and he also knew that they were more or less adopted in that county as well as in other parts of the country. Those scales were entered into numerous leases and agreements, so that if the Tenant-Right Bill was not all they could desire, he was by no means satisfied that no good had resulted from the passing of the measure and from the public notice

which had been called to the subject. Not only, however, had it become patent that compensation must be given where it was due, but that obsolete agreements should be modified. This is a point that should be looked into, especially at a time when they saw hay and straw selling at high prices, and cereals at low rates. Farmers should be unfettered, and be allowed to sell what they chose, so long as they returned what was necessary to the land in some way, he did not want to leave the landlords unprotected, or that he should suffer, and with a six months' notice he did not think any would do so. Alluding to the question of subventions from the Imperial Treasury in aid of local burdens, Mr. Jones said he believed they would have nothing to fear from the undue interference of Government officials if county boards were established, and he concluded by urging that in discussing questions of that sort they should consider which were best for the interests of agriculture, and avoid pitting one Government against another.

Mr. STANLEY LEIGHTON, M.P., said he had before heard it argued that the farmers had no right to ask for assistance from the Consolidated Fund, because they did not know what that fund was, but he had never before heard the argument adduced about a meeting of a Chamber of Agriculture. Then, again, the old bugbear "centralisation" was held before them as a reason against such subsidies, and he would answer it by the famous text that they must "render unto Caesar the things which are Caesar's." They must render to the local exchequer the things which belonged to it, and to the Imperial Exchequer that which belonged to it. There were certain things which they were prepared to pay for out of the local rates, while there were other things in different localities which ought to be paid for out of Imperial funds; and the Government had already to some extent accepted the force of that argument. There were moneys collected which went to the Imperial treasury which they thought ought to go to the relief of local burdens, and one reason why they were in favour of county boards was that they thought such boards would be able to receive and apply those moneys. He asserted, without fear of contradiction, that the land, at a distance from towns, is really of less value now than seventy years ago, and those who had spent their money in such land, instead of making their fortunes, had been actually working upon capital which was diminishing in value. They would see it as clear as possible if they would consider the value of an acre of land which produced wheat at the beginning of the present century when labour cost one-third less, and when wheat realised so much more per quarter than it does at present. Does one acre of land produce half as much profit now as it did then? Manchester, it is said, turned out a millionaire every three days; he should like to know how many agriculturists had turned out during the last century.

The Rev. W. W. EDWARDS thought it desirable that Chambers of Agriculture should keep the question of the repeal of the malt-tax open for discussion, for if they did not do so, when the question came again before Parliament, it would be said that farmers did not want the repeal of the tax. It was very essential, too, that their members of Parliament should be backed up in the country, otherwise when they brought important subjects like that before the House they would be looked upon merely as men with crotchets and not as representative men.

Mr. J. BATHER said as to local taxation, he thought it was of the greatest possible importance they should carefully consider the policy of getting subventions from the Consolidated Fund, for they had already tried it and had seen how it

answered. As regards the police rate, for instance, that rate was as high now as ever, and many things had been done in that country which were contrary to the experience and judgment of the magistrates. Getting assistance from the Consolidated Fund for the relief of local rates was very much like getting money out of one pocket and putting it into another; and he believed the Prisons Bill, although they did not altogether disapprove of it, would not afford the slightest relief to the country as a whole.

No resolution was proposed, and Mr. More having replied, the meeting closed with the usual votes of thanks.

Y O R K.

A meeting of his Chamber was held on Thursday, Nov. 1, at the Queen's Hotel, Micklegate, for the purpose of discussing a proposal to form an association of the Yorkshire Chambers of Agriculture, with York for its centre. Mr. Jonathan Dann, of Kelfield, presided, and there was a moderate attendance.

After some discussion it was agreed that the feeling of the various Chambers should be ascertained on this subject.

Mr. COLEMAN called attention to an important matter, that it was desirable that they should express confidence in and endeavour to strengthen the hands of the Government by some memorial to them praying them to carry out as far as possible the recommendations of the Cattle Plague Committee.

The Hon. Admiral DUNCOMBE seconded the proposition, and it was agreed to.

The Hon. Admiral DUNCOMBE observed that with regard to the question of the statute hirings there appeared to him to be little progress, and there would not be until there was more union amongst the different persons affected. It was very desirable, considering the illegality of many hirings, that they should be fixed for the Martinmas week, and, therefore, as the duty devolved upon him as lord of the manor, he had fixed the hirings to take place on the 24th of November. He had, however, seen in an advertisement, headed Pocklington Hirings, that the statutes were to be held on Friday, November 9th. The advertisement concluded with "By order." He could not understand where the "By order" had come from. He had no doubt there would be a partial hiring on the 9th and one on the 24th November, and unless some systematic plan could be adopted, these auxiliary hirings would rather increase the evil than otherwise. A check might be brought to bear upon them if the farmers prevented their servants from attending those hirings, and summoned them before the magistrates if they left their work to do so.

The CHAIRMAN remarked that he thought it was a pity that the farmers were not more true to themselves. They said they were always in favour of improvement, but when some little sacrifice was demanded of them they were very reluctant to make it.

THE FOOD OF LONDON.—London consumes daily about 300 tons of fish, over 4,000 sheep, nearly 700 oxen, about 100 calves, 4,000 pigs—including bacon and hams, not less than 5,000 fowls, a million or so of oysters, eggs innumerable, with flour enough for 1,000,000 loaves of bread, and vegetables, fruits, butter, and cheese in proportion.—*Rural New Yorker.*

MR. MECKI'S SERVICES.—A CORRESPONDENCE.—1.

To Mr. Mecki.—It will interest you to know that the crop of oats I mentioned to you in the spring has been the best the farmer ever grew in his life, with about half the usual quantity of seed sown by mistake. He told me so yesterday. Even thus he is in excess of your quantity. I have been recommending your plan of hurdles for sheep. You give the length as 15 feet, but I do not think you anywhere state the width and height. Will you oblige me with these particulars, and if the sheep eat through the side bars or that portion upon which they are confined? In vol. 1, p. 328, the words, "as detailed in my book of farming," occur. Have you published any other books besides the three volumes of "How to Farm Profitably"? It vexes me to read of men giving details of the mode of farming you have been advocating for 30 years without mention of your name, and as if it was something they had discovered. It would be an immense step towards profitable farming if men would reflect on and admit their faults and shortcomings, along with their complaints of dear labour, bad seasons, and high rents. The farming interest will some day, when you are gone, reverence your name.—*J. H. G., Cheshire, October 17.*—2. *From Mr. Mecki.*—I really believe that my volumes have been textbooks for many public orators on agriculture, who forget to acknowledge the fact: but it would be unreasonable for a public man to expect much general gratitude or praise, at all events, during his lifetime. The fact is, that before the people of this country can be fed with home-grown food a great many of our present agricultural practices must be changed and improved, both as regards farmers and landowners. It is the want of these changes that causes agriculture to be less profitable than it might be. While I admired Mr. Caird's very able and lucid exposition of our present British agriculture, I regretted that he did not exhibit and condemn its shortcomings, and point to what it should and might be under various and important changes and improvements. My hope is in the future, for we can only expect from the rising generation of juvenile book farmers (educated with sound agricultural theories, and their minds freed from the trammels of antiquated practice) a keen appreciation of things as they should be, and not as they are or have been. An increase in produce and management of only £1 per acre (and it might be much more) on our farmed acres, as returned to the Board of Trade, would add £47,000,000 to our home food supply. In fact, as regards management of horse and other live stock only, an immense saving and gain could be made. You will shortly see a sketch and dimensions of the iron hurdles on wheels (see p. 403). I have only published three volumes, containing about 1,400 pages. When the Agricultural Holdings Act becomes generally accepted there will be an astonishing influx of capital and improvement. I hear that this is already taking place on a noble estate, whose owner has placed himself under the Act. Improvements in farming as in towns require additional capital.—*J. J. Mecki, Oct. 19.*

PRESERVED VEGETABLE MARROW.—*The Garden* gives this recipe for preserving vegetable marrow:—Mix together four pounds of the fruit, peeled and cut up into small pieces, three pounds of white sugar, about a third of an ounce of ground ginger, and the peel of a large lemon cut up small and with the juice squeezed in; boil this mixture for nearly two hours, and it will set firm when cool; it will keep for a year or longer. When properly mixed, it makes a preserve of the most delicious kind, and one which would puzzle any one not acquainted with its constituents to tell what it was.

PARIS EXHIBITION, 1878.

The space allotted to Great Britain in the Exhibition buildings being somewhat restricted in proportion to the unprecedentedly large number of applications by intending exhibitors, there seemed but little probability that the agricultural interests of this country could be worthily represented.

Mr. Andcliffe Owen, the Secretary to the Royal Commission, keenly alive to the very great importance of this branch of our national industry, was fortunate enough however to obtain a special allotment of ground, with permission to erect one or more annexes destined exclusively for the exhibition of manufactures and products connected with agriculture.

These annexes, two in number, have been completed; and although detached from, are in close proximity to, the main building. The larger is 263 feet by 164, and therefore gives between four and five thousand square yards of space; the smaller is 525 feet long and about 65 feet wide, giving somewhat less than three thousand square yards.

Neither of these buildings have any pretensions to architectural beauty, but have been designed and erected by Mr. Redgrave with the sole object of enabling exhibitors to make the most effective display. The larger annex (which bears a strong family likeness to the "Brompton Boilers") will be entirely occupied by the makers of Agricultural Implements, represented by the most important firms in the country, and the arrangements and allotment of space are such that one of the most perfect and complete exhibitions of this description is already assured.

In the second-class building will be found the various industries forming part of, or closely connected with, the science of agriculture—and here a great advance as compared with the arrangements of former exhibitions is at once apparent. These agricultural halls will be really what they profess to be, and their contents will not consist of a heterogeneous collection of articles which even the greatest stretch of the imagination has difficulty in connecting with British agriculture.

Candles, pickles, patent medicines, biscuits, and chocolate have, ere now, been seen in agricultural annexes. All these articles, important in themselves, will now find their proper location in their respective sections, and apart from that of agriculture.

The annexes are admirably situated on the left of the main building in a line with its facade, fronting the Seine, and a railway skirts, at the distance only of a few yards, the principal entrance, affording thus great facilities for the unloading, at the very door of the annex, of heavy goods and machinery, without extra expense or risk of breakage.

Those interested in agriculture should be well satisfied with Mr. Owen's arrangements and organisation of this portion of the Exhibition of 1878.

IRON HURDLES.

TO THE EDITOR OF THE MARK LANE EXPRESS.

SIR,—Mr. Mechi recommends iron fold hurdles on wheels, adding that his have lasted 30 years; now my own experience of their durability is so widely different from his that either the Tiptree hurdles must have been unusually well-made, or like the lad's knife, owing to repairs but little of the original structures remain. When a much younger man, I was most anxious for iron hurdles, believing them to be indestructible; however, by the time I was in a position to indulge my fancy, my views had changed altogether, for I found they were constant visitors to the forge. In fact one of my friends discarded his entirely after an eight years' trial, giving me as his reason that his blacksmith's fires had become ruinous; further than this, one of the most practical farmers we have in Suffolk gave it as his opinion in an after-dinner speech at an agricultural gathering some little time since, that a farmer could keep himself in common ash hurdles for the interest of the money that the iron kind cost, and I quite believe it.

I am, sir, yours &c.,

A PRACTICAL FARMER.

GAS TAR AS A WHEAT DRESSING.

TO THE EDITOR OF THE MARK LANE EXPRESS.

SIR,—So many people ask or write to me about my plan of dressing seed corn that you will oblige by giving insertion to the following particulars: I am now drilling wheat for the sixth year, dressed with gas tar, and have never known it fail with wheat, oats, or barley. Two years ago a new foreman I had persuaded me that rooks would not touch winter oats if not dressed. I foolishly listened to him, and the consequence was it cost me some pounds to keep the rooks from them, whilst they never attempted to touch six acres of winter barley which was dressed with the tar, in the same field. Besides being so sure in its effects, it has the advantage of cheapness, as the cost is little if anything over one penny per acre. Gas tar can be had at any gas works at from 3d. to 6d. per gallon, and I have bought it at 10s. per ton for other purposes. My plan is as follows:—Dress the corn with blue stone as usual, making it thoroughly wet, then mix nearly a pint and a-half of tar with some hot water till it is thin enough to run freely, and pour over a sack of corn, stirring it till every kernel is dark with tar. Let it remain a few hours, or all night, and then sift and mix with it sufficient slacked lime to prevent any stickiness, and it will be fit to drill. Now that boys cannot be had at any price, and men are too expensive, it is our own fault if we suffer from the ravages of the rooks, unless it be in the case of peas or beans, for which it cannot be so thoroughly depended on.

I am, sir, yours, &c.,

R. IMPEY.

Street, Somerset, Oct. 31st.

THE ARGENTINE CONFEDERATION.

From an interesting account of a visit paid to the Argentine Republic, by Mr. T. Brassey, in *The Nineteenth Century*, we give the following extracts:—

I cannot attempt to give a general description of the Argentine Republic. According to the recent report of Consul Cowper it contains upwards of 2,000,000 inhabitants, and its superficial area is estimated at 1,000,000 square miles, situated under every variety of climate. All the productions of the temperate zone are to be found in its central provinces, which enjoy a climate unsurpassed by any region of the globe.

With all the disadvantages of constant political disturbances and most imperfect security both for person and property, the Argentine Confederation has advanced with marvellous strides. In a speech, delivered in 1873 at Buenos Ayres, Dr. Rawson, an ex-minister, pointed out that the foreign commerce of the Republic had advanced from 26,000,000 dollars in 1862, to 80,000,000 in 1872; and that immigration had increased in the corresponding period, from 5,000 to 40,000. In this extensive commerce Great Britain has obtained an important share, as the following figures testify:—

	Imports.	Exports.
Total	£13,285,766	£9,024,081
Of which		
England	3,868,894	1,978,861
France	3,645,027	1,735,563
Belgium	593,517	2,778,301
United States	1,033,523	606,589

The native inhabitants are almost exclusively occupied as graziers, whether of sheep or cattle. With a view, however, of attracting a more numerous population, and thus creating a busy traffic on the railway, an attempt was made to introduce arable cultivation on the lands conceded to the Central Argentine Railway Company. For this purpose the land was divided into plots of 80 acres each, and settlers were introduced from Europe. All their expenses were paid by the Company, and each was provided with a small hut and a well on his allotment. The first colonies were laid out in the vicinity of the stations nearest the Rosario Terminus. Five of these colonies have been formed, with a total population of 4,524 Europeans and 1,000 native settlers. The largest of these is Roldan, with a population of 2,369. The more fertile lands will produce abundant crops of wheat for four years in succession, without manure, or a rotation of green crops. A station master on the line rents 3,000 acres of land, of which 1,000 acres were sown with wheat. In 1875 he raised six bushels of wheat per acre, at a cost of 11s., the selling price being 22s. The unsettled condition of commercial affairs in the Argentine Republic is clearly indicated in the extraordinary fluctuations in the prices of wheat. In Rosario, in 1876, the highest price was 52s. the bushel. This lasted for a very short time only. The price then fell to about 25s., at which figure it stood for more than six months. These oscillations are a great drawback to farmers, and make it almost impossible for them to borrow capital for agricultural operations.

As a rule a crop of nine bushels of wheat per acre pays well. Twenty bushels, however, are often grown. Consul Joel, in his report for 1875, quotes a case that had come under

his own observation in Roldan, one of our colonies, where a colonist sowed 6½ bushels on 8½ acres, and cropped 360 bushels, which was over 40 bushels to the acre. The seed was white wheat, which is used exclusively in this country for the manufacture of macaroni. The average yield of the colonies in 1875 was 12½ bushels per acre.

It will be evident from these figures that arable cultivation would yield a highly satisfactory return but for the frequent invasion of the locusts. Their periodical visits are a most grievous scourge. They destroy, in a few hours, crops, orchards, and vegetation of all kinds. While riding over Messrs. Hope's farm, we saw 1,000 acres of wheat which was just beginning to shoot, in the very process of being eaten up. The locusts were so numerous that they both darkened the air and covered the earth with a swarm so dense that the blades of corn were only just visible here and there. A horse walking through the wheat caused them to rise in myriads. It was possible that the wheat might partially recover, provided there were abundant rains after the locusts had departed, but even then they might reappear and resume the work of destruction. It will be evident that the locust in South America rivals the Colorado beetle in ominous and surprising capability for doing evil. The periodical recurrence of this terrible scourge makes it impossible for the farmer in these countries to rely on tillage alone. Tillage must be combined with pasture. The experience of the natives, who are the most successful settlers, has taught them this lesson. On the four leagues adjacent to Rosario, reserved by the Government from expropriation, and occupied exclusively by the natives, there is no tillage, but vast herds of cattle and large flocks of sheep are reared, and render an ample return to the estancieros.

In riding through the colonies a conspicuous difference is apparent between the condition of the individual colonists. Two men will be found, living side by side, who commenced colonial life under precisely equal conditions, having no capital, but with 80 acres of land assigned to them for cultivation. Of these the one is prosperous, the owner of the land he uses and free from debt to the Company. His neighbour will have paid neither principal nor interest on the purchase money of his land, he will have done nothing to reduce his indebtedness for money advanced to him, and at the same time be living in a state of semi-starvation and misery. In such cases, and they are common, you generally discover an obvious explanation in the bright intelligent countenance of the one, and the dull heavy look of the other. Yet there are doubtless numerous instances of undeserved misfortunes.

The most unhappy of the colonies established on the line of the Central Argentine Railway is situated at a station called Tortugas. For three years in succession the crops have been destroyed by locusts, drought, and hailstones. The drought is a misfortune peculiar to this colony. The other drawbacks, are felt more or less in every part of the Argentine Confederacy. "I conversed at length with the manager on the condition and prospects of the people under his charge. Unless their crop, which has already been devoured by locusts, recovered, their situation would be utterly hopeless. I very strongly urged the necessity of removing a portion of the colonists into a more favourable district, should the coming harvest again prove a failure. Nothing will be sacrificed by the adoption of

such a course. The colonists have bought 2,000 squares (each $\frac{1}{4}$ 1-6th acres in extent) under cultivation, and the valuation of the cultivation was formerly estimated at 10s. a square. But the colonists themselves are now so thoroughly disheartened that they would willingly leave their present lands without compensation if they were to receive an allotment of an equal area of untitled land in a more promising situation. Their dwellings being built of clods of earth, or dried bricks, have no value, except for the roof and tiles, and the latter could be taken down and carted to another site. The removal would not involve the Company in any expense, as the settlers would be prepared to convey their scanty possessions in their own carts to their new allotments.

Having briefly described the actual condition of the colonies, I turn to the policy to be adopted in the management of these estates in the future. The grave error of introducing emigrants from Europe at the expense of the Company is not likely to be repeated. The special case of the colonists at Tortugas excepted, no further expenditure should be incurred, whether in giving aid to those already settled on our lands, or in attracting new settlers.

The natives and foreigners, who have already had experience in this country, succeed best, and are the most regular in their payments. The policy of the Company is to sit still, and to be prepared to negotiate sales with all comers, who can show that they possess sufficient resources to justify them in making an agreement to purchase land. There will be no lack of suitable settlers. Italian Protestants have of late been removing from the North to settle on our land. These men are thrifty, industrious, and acquainted with the most effective methods of tilling land in these countries.

It has already been stated that the concession of land from the Government to the Railway Company formed a vast territory of no less than 146 square leagues. Its value, however, is but small, and the prices, low as they are, which may ultimately be expected, can only be realised in a long lapse of time. I give the figures as an indication of the wild character of the country in the South American republics.

Forty-two leagues of the concession are situated within the province of Santa Fé, of which Rosario is the capital. The value of these lands is £8,000 a league. Ten leagues of marshy land in the same province are worth £3,000 a league. Ninety-four leagues are in the province of Cordova. The district is an uninhabited desert, and the value of the land does not exceed £500 a square league.

I quitted the colonies of the Central Argentine Land Company profoundly impressed with the conviction that all attempts to stimulate emigration artificially are full of hazard.

Starting on the 22nd of September we made an interesting excursion into the province of Buenos Ayres. Proceeding twenty miles by railway and ten miles in carriages over the pampas, we reached a large farm, belonging to one of the principal tramway companies of the city. The farm is 2,500 acres in extent, and consists of good pasture land, watered by a brimming brook. It was purchased a few years ago for £8,000, and no less than £24,000 has been offered for the property within the last six months. A hundred men are here employed as horsekeepers, and in gathering-in the hay and green crops required for a stud of 800 horses. The wages of the farm labourers, or peons, are £3 a month. They are lodged and found at an additional cost of thirty shillings a month.

Lucerne is the most advantageous food for cattle in this country. Five crops are obtained every year. Of maize the return is ample. Oats are a failure: nothing but straw is produced. "Wheat," says Sir Woodbine Parish, "requires the cooler climate of the Southern part of the provinces." Flax and hemp have been tried with success. The vine, the orange, the fig, and the peach flourish luxuriantly, especially the latter. The price of lean stock is about thirty shillings a head. When fatted, which takes about three months on good land, the same cattle will fetch £4 a head. Horses not broken can be bought for £3, and will generally stand regular work in the tramway cars for a period of five years. Cattle for forming herds are obtainable at from 18s. to 20s. per head.

From the tramway car we drove to the estancia of Mr. B——, and on the following morning I rode round his farm. It contains 45,000 sheep, which are fed on 3,830 squares of land, each of $\frac{1}{4}$ acres in extent. In the province of Buenos Ayres it is commonly estimated that from 20,000 to 17,000 sheep can be fed on a league of superior land. If this assumption can be justified by experience, land in the Argentine Confederation will carry more sheep than an equal area in Australia. Here three sheep can be fed on one acre. In Australia three acres are required to feed one sheep. In the Argentine Confederation wool can be produced for 4d. per pound. In Australia unwashed wool could not be produced under 9d. per pound. The Australian wool is now nearly as bulky as the Argentine, but the former has a superior staple. In the Argentine Confederation a flock of 2,000 sheep would produce 400 arrobas of wool, an arroba weighing 25·35 pounds avoirdupois. The arroba should sell for 75 dollars; and taking off 10 dollars for the expenses of shearing, baling, and other charges, there remains a profit of 65 dollars a ton, or 11s. per arroba, or a total return of £220 from each flock of 2,000 sheep. The positive expenses for the maintenance of such a flock, including the rent of land and the wages of the shepherd, are from £120 to £150 a year. The wool alone should pay all the expenses of the Argentine sheep-owner, and a profit of 5 per cent. on the capital embarked. The tallow and the new stock are a clear additional profit. In good years the profits realised in this country are much larger than in Australia. On the other hand, the risks from drought are greater. The calculations I have given are based on statements furnished to me by gentlemen of long experience, who have had many opportunities of comparing their results with those obtained in Australia. It is, however, possible that an Australian sheep-farmer might be disposed to modify the figures in favour of his own country.

The same subject was ably discussed by Mr. Macdonnell in the report which he wrote when Chargé d'Affaires at Buenos Ayres. He does not advise emigrants to come to the River Plate with the view of engaging in agriculture; for though the soil, consisting of marine and alluvial deposit, is remarkably fertile, yet there are numerous obstacles to successful cultivation, "including sudden changes of temperature, violent storms of wind, dust, and rain, long-continued droughts, heavy and persistent rains, locusts, bichos, basket-worms, and ants."

Mr. Macdonnell recommends sheep-farming as the most lucrative occupation in which British settlers can engage. Cattle-farming is mostly in the hands of natives, many of whom have made large fortunes. Herds of cattle require extensive pastures, and can be kept most advantageously in the outlying provinces, where land is cheap. For sheep a less

extent of land is necessary, but it should be of superior quality.

The natural grasses of Buenos Ayres possess admirable fattening qualities, and the flocks produce a description of wool especially adapted for fine kersey cloths, and extensively consumed in France and Belgium. The yarn spun from it in the latter country is in great demand in Scotland and the North of Germany.

The increase in the export of wool is remarkable. While 42,275 bales were exported in 1860, there were exported in 1870 of wool 100,369 bales, of the value of £2,195,119, and upwards of 57,000,000 pounds of shreppskins.

Mr. St. John, the successor of Mr. Macdonnell, in his report for 1875, speaks of wool as by far the most important product of the country. The amount in English pounds exported in 1873 was 156,781,756, on which the official valuation was £3,416,156, making the bale of 800 English pounds to be worth £17 8s. 7½d. In the following year the same authority gives the value of the wool exported at £3,592,629, distributed as follows:

Belgium	£2,242,536
France	223,485
England	213,433

The treatment of the subjects under consideration would be incomplete without an attempt to give an opinion on the suitability of the Argentine Republic as a field for British emigration.

The comparative advantages and disadvantages have been concisely summed up by Mr. Macdonnell. The chief obstacles to the success of a British emigrant are the language; the invasions of Indians; the unjust seizure of property both by Rebel and Government troops; the difficulty of transporting in a roadless country; the defective administration of justice; and the jealousy with which all foreigners are regarded by the native inhabitants.

According to Consul Cowper, the great body of British emigrants to the Republic are Irish. They are admirable colonists. The successful sheep-farming in the Republic is mainly in their hands, and yet they receive no protection from the Government against the marauding gauchos. "Why," then he says, "with colonies of our own, upon which the sun never sets, and consequently with every variety of climate and production—with the United States, which is only politically a foreign country, British subjects can be induced to migrate to foreign lands, where laws, customs, and languages are all different from those of their own country, and where the administration of the laws is defective, I am at a loss to conceive: but I would remind them, that if, in addition to the pain of abandoning their native land, and the laws under which they have grown up and been protected, they seek an unknown land where everything is changed, they weight themselves for the race of life, and no advantage which may be offered them will compensate for the chances they have lost in rejecting those fertile fields of emigration which had been prepared for them by their own countrymen."

Such are the disadvantages. On the other hand, the climate is healthy, the soil fertile, the territory sparsely populated, and the land in consequence obtainable at moderate prices.

There is one class of immigrants from England, already too numerous represented in Buenos Ayres, for whom failure can without any hesitation be predicted. These are the young gentlemen, of slender education, and idle disposition, who have lived too fast at home, and having squandered their slender

inheritance, and exhausted the patience and generosity of their relatives, are sent out to retrieve their fallen fortunes in a land which demands, as the essential conditions of success, both practical experience in the management of stock, and the sterling moral qualities of thrift, energy, and self-control.

The settlers most likely to succeed do not belong to the class of manual labourers. For them an English-speaking country is far preferable. English emigrants to the River Plate should be men possessing a little capital, who are prepared to go through an apprenticeship of some years' duration under a successful estanciero, paying for a board and lodging with their manual labour, able to command a capital of not less than £2,000, and patient enough to wait until they have learned the art of managing an estate in these countries, before they venture to take an estancia on their own account.

The statistics of population afford conclusive evidence of the non-agricultural tendency of the Argentine immigrants. Out of a population of 1,736,901, 1,114,160 are disseminated over 500,000 square miles, or barely two inhabitants per square mile. On the other hand, the density of population in the city of Buenos Ayres is 40,000 per square mile, or one-third more than that of London. The immigrants from Italy remain for the most part in the capital.

Like the Brazilian Government, the authorities at Buenos Ayres have made some abortive efforts to establish State colonies in the Republic. A wiser policy has been adopted in the United States. The action of their Government has been limited to the enactment in 1862 of the liberal homestead law, which has attracted emigrants to the States in numbers, increasing rapidly from 76,396 in 1861 to 156,844 in 1862, and 258,989 in 1869. In the Argentine Republic the principle of free gifts of land has not as yet been accepted. The land law passed at Buenos Ayres in 1871 contains provisions for the sale of the frontier lands in lots of eight square leagues, or 13,300 acres, at prices equal to 1s. 9d. per statute acre, payable one-tenth in cash, and the remainder in eight yearly instalments.

In our walks with the Colonel this morning we heard many interesting narratives of warfare with wild Indians. These naked horsemen of the pampas fight bravely, but they cannot resist the Remington breech-loading rifle. When the regular troops advance to the attack, the Indians rarely make a stand. Nevertheless, within the last twelve months, Colonel Donorra has fought four engagements with bands of marauders, and on a recent occasion rescued 30,000 head of cattle, which had been stolen. The Indians sell all the cattle to the Chileans. They have therefore to drive their spoil for a great distance, and, unless their operations were conducted on a large scale they would make but small profit by their hazardous enterprises. At the date of our visit it was in contemplation to advance the Argentine frontier further South, and to defend it by a chain of forts and a deep ditch. According to the statement in the last Presidential Message, this plan has been carried out. The new frontier on the South has been formed from Bahía Blanca, on the coast, in 39° S. latitude, to Rio Quinto, in the interior, in 34° S. latitude and 64° W. longitude. Its length is 381 miles, and it is defended by seven principal forts with villages attached, and by 119 block-houses and smaller forts. Where the country is most exposed to the incursions of the Indians, a fosse has been dug, 65 miles long, and telegraphic communication has been established for a distance of 200 miles. It is

proposed to fortify a similar frontier line on the West, extending from Rio Quinto to Fort San Rafael in Mendoza. The President speaks of the success of these works with the utmost confidence. As we travelled on our return journey from Azul, by daylight, we were enabled to see the richness of the pastures of Buenos Ayres. The soil produces luxuriant crops of lucerne. In winter the thistles cover the ground in some districts with masses of green leaves. In summer they rise to a height of 12 feet, so that it is impossible to traverse the pampas, except by the regular tracks. The agricultural statistics of the Argentine Republic are summarised by Consul Cowper in his last report. According to his estimate there exist in the country 80,000,000 sheep, 15,000,000 horned cattle, and 4,000,000 horses. Their value is estimated at £53,000,000. About 500,000 mares and cows and 12,000,000

sheep are annually slaughtered. The wool, hides, sheepskins, horns, Liebig's extract of meat, and other products exported are valued at £9,000,000. The value of the hides and skins exported in 1875, according to Mr. St. John, was £1,669,211, of which the United States took £150,532. The export of ox and cow, salted, in the same year was £576,409. The abundance of horses is shown in the lavish employment of these animals. One at least is provided for every farm labourer. It is no uncommon thing to see six horses yoked in two ranks to a two-wheel cart. "Even the very beggars," says Sir Woodbine Parish, "solicit alms from the saddle." If only political tranquillity and personal security could be maintained, an era of material prosperity would be assured to the Argentine Republic.

PASTURE AND POPULATION.

Every household is so directly concerned in the supply and the price of meat that the alarm recently sounded tracing the decrease of cattle in the country to the extension of the area under pasture deserves some investigation. Briefly stated, the complaint about the increase of grass resolves itself into three heads; first, that an acre of highly cultivated arable land will produce quadruple the quantity of beef compared with an acre of pasture; secondly, that, as a natural consequence, as pasture widens, the price of meat must rise; thirdly, that the spread of the innocent-looking grass-blades means the partial extinction of the agricultural population. Now, apart from the Scotch and American supplies, the sources of English beef are the grazing, the arable, and the dairy farms. Upon a dairy farm of 240 acres, all grass and good land, seventy cows may be kept, which yield a great weight of human food, either as milk or as butter and cheese. A few beasts are annually fattened and go to the butcher, but it is in calves, *i.e.*, veal, that the dairy plays its part as a manufactory of meat. Many such calves, moreover, after passing the dealers' hands, reach the grazier, and form the rough material which he shapes into beef. So that the aforesaid few beasts which the dairy sends direct to the consumer do not by any means represent the real productive power. The grazier is a farmer whose system it is to purchase cattle young and in only moderate condition, feed them up to a certain point, and despatch them by rail direct to the London salesman. Obviously these young cattle have to come from somewhere—Herefords and Devons from their respective counties, come from Scotland, numbers from Ireland, and black animals from Wales, in addition to the calves which are bred in the dairy districts. These the grazier buys late in autumn or early in the spring, turns his cattle out upon grass during the summer, and by the ensuing autumn reckons to clear off almost the whole drove to the butcher. The precise number of beasts grazed per acre varies, of course, with the character of the soil and the class of cattle kept. In the Midland Counties, upon fairly good pasture land, a common proportion is two bullocks to three acres. In addition, each acre carries one sheep. These pastures, however, are supplemented with a certain proportion of arable land, sometimes as much as a third, but this affects the sheep principally, since the major portion of the bullocks are cleared by autumn for London. From a farm of 900 acres, of which 800 are grass and the rest ploughed land, from 300 to 400 beasts will pass to the consumer in the course of the season. When the ratio of ploughed land rises above one-half of the farm area, the num-

ber of beasts that can be profitably grazed rapidly diminishes, and the competition for pasture grows brisker; inasmuch that those who cannot get grass land in their own immediate neighbourhood frequently rent a second farm, all grass, several miles distant. This in itself is a conclusive proof of the high value of pasture as a meat-maker.

To illustrate the comparative meat-producing power of grass *versus* arable glance at the latest returns for Devon and Norfolk. Devon is chiefly pasture, and the occupiers are engaged in grazing and dairy; Norfolk is principally arable; the total cultivated area of each approximates, but the acreage under grass is widely different. In 1877 Devon comprised 1,103,643 acres, and possessed 216,315 cattle of all kinds; Norfolk, 1,072,686 acres and only 108,052 cattle—just about half the number of the pasture country. This ratio curiously corresponds with the area of pasture. Devon has 457,601 acres of permanent grass; Norfolk, 241,849. But surely Norfolk, as a great root-growing county, should excel in sheep; but no—while the root husbandry of Norfolk supports 679,218, the grass of Devon carries 916,458. If it be objected that Devon rejoices in some of the richest pasture in England, and Norfolk has a poor soil, the reply is, in the latter county the science of arable farming has been carried to the very highest pitch, probably higher than anywhere else. Consequently, if the allegation were true that ploughed land will carry larger quantities of meat than grass, then the stock in Norfolk should at least more nearly equal that in Devon. Between Leicester and Suffolk the contrast is still more striking—almost startling. Leicester, every one knows, is pre-eminently a grass county. Roughly speaking, two-thirds are pasture—in exact figures, area, 470,530 acres; permanent pasture, 297,324 acres. No less than 122,019 cattle are to be found in this small county. Suffolk, on the east coast, is in the corn division, and with an area of 770,128 acres, of which only 150,805 acres are grass—about a fifth—carries but 59,654 cattle! With very nearly 300,000 more acres, the corn or ploughed county possesses less than half the cattle of the little grass county. In fact, taking the entire 21 grazing counties and comparing them with the 21 corn counties, it appears that the grazing division contains 65.9 per cent. of the total number of cattle in England proper. These figures should at once allay all anxiety as to the increase of pasture being instrumental in diminishing the beef supply and causing a rise of prices.

There are, moreover, several natural checks to the excessive growth of grass which in all human probability will ever re-

strain it within certain limits. Over large tracts of land the soil is too poor to bear it; grass will grow, of course, but not sufficiently well for dairy or grazing purposes. The rainfall on the eastern side of the country is deficient, so much so that meadows are only seen in some districts by the banks of the rivers, which not only overflow but in past ages have deposited an alluvial earth of greater fertility. Then the mere cost of laying down pasture is considerable, and finally, and perhaps more forcibly, comes the ever-increasing demand for straw. Both for litter and for fodder—in the shape of chaff to economise expensive feed—straw becomes more valuable annually, as the agricultural policy settles down firmly in the direction of meat. Where the soil will not bear grazing and the rainfall is deficient, while all who keep stock cry as loudly for straw as the Israelites under Pharaoh, there is little danger that the plough will cease to turn the furrow. The drift of the argument, when these facts and figures are calmly considered, is not to depreciate arable farming in its proper place, but to demonstrate that it cannot compete with good pasture in the economical production of beef. The cost of labour alone forbids, for while a grazier can work a hundred acres of grass with one man (in some places even more), three labourers are required to cultivate the same area of corn. In former days four men was the rule for one hundred acres arable (stiff land), but machinery has lowered the ratio. This machinery and artificial manure, without which nothing can be done, add enormously to the capital invested in successful arable farming. The price of a steam plough and tackle alone would stock a small dairy. To an owner of land, pasture recommends itself for the best possible reasons—a rent at least a third higher will be paid (30s. arable, 40s. grass), a tenant is always forthcoming, and the value of the fee-simple is much greater. Perhaps, from a purely farmer's point of view, the most profitable—some will say the only profitable—holdings at the present moment are dairies, and those lands which, without being too heavily rented, will produce good malting barley.

It is quite true that in some pasture counties villages may be found which are practically deserted. Beyond the vicar's residence, and the mansion of a landlord only there in the hunting season, not more than two farm-houses and half a dozen cottages are inhabited. The church, if such a simile be permissible, is a "world too wide" for the shrunken shanks of the place. Upon the surface this undoubtedly has the appearance of indicating that grass is injurious to population; but upon inquiry it will be found that it is no new thing. The real desertion occurred many years ago, shortly after the repeal of the Corn Laws—a repeal followed not by a decrease but increase of population—for then land naturally fitted for pasture was restored to its primitive condition. Further desertion took place when such high wages were offered in manufacturing towns and for navy works on railways, just as at this very hour the scarcity of female and boy labour in the field is partly caused by the demand for it in mills and factories. These broad pastures, which seem to have exterminated the human race, in reality have done precisely the opposite. By the beef and mutton profitably grown on them the huge masses concentrated in the cities are fed. The descendants of the very men who left these empty villages—multiplied tenfold in London, Birmingham, &c.—are eating steaks and chops grown from the green grass which has supplanted the yellow corn their fathers reaped. Profitably grown advisedly, because farming is a business and not a matter of sentiment, and unless it can be done with a margin of profit it is clear meat will not be made at all, at least by private enterprise. Those who

deplore the decline of arable farming trace it principally to the excessive expenditure upon machinery, labour, manure, and so on, which render it difficult to obtain a moderate percentage even in good seasons, and in bad years quite impossible. The logical sequence then stares one in the face—unless we have grass we cannot make meat at home profitably; if it cannot be made profitably it will not be made at all; and what then? State aid or foreign importation, neither of which is probable in the requisite degree. Pasture, therefore, as the most economical producer of meat, is most favourable to population.—*From the Pall Mall Gazette.*

THE BARLEY CROP IN THE UNITED STATES.

We have received from Messrs. Sommers and Co., barley shippers, of Chicago, a report of the barley crop in the various States of the Union, from which we extract this summary:—

"As a summary the whole matter occurs to us thus—that the crops of Ohio, Indiana, and Kentucky do not amount to much, either in acreage, yield, or condition. Illinois is about in the same fix, only not quite so bad in quality. The choice of the Michigan crop will be taken at home, as the demands of the State are large, and the brewers at Detroit, Kalamazoo, and a dozen other interior points consume it exclusively, and after they get their pick the remainder will not be worth much, except for feed. In Nebraska, although the crop is excellent, the total amount available is small comparatively. The freights are so high, and prices here low, that it is impossible to ship from there now at living figures. The Kansas crop is too small and poor in quality for much consideration, and whatever finds its way to this market from there will not grade higher than feed, and to save money it will probably be fed at home. As for the Iowa crop, it is nearly on a par with last year's in quality, and we fail to see why—even if this State did raise 4,000,000 bushels, and the greater part will not inspect over No. 3 here (extra No. 3 at best), and it only brings from 20 to 30c. at home—it should depress and depreciate the markets all over the country for good barley to such an extent as it has. We must therefore look to Wisconsin and Minnesota for our choice barley this season, and it will require them to have a heavy surplus each to stand the drain until next May, and we feel satisfied it will take higher prices than the present; to bring out the fine malting stock, especially from Minnesota. A healthy increase in area is always to be expected under favorable auspices, also in quality and yield, but we fear the discount in prices since the season opened has been too discouraging for the farmers to net living returns. Theories and estimates will not prevail long before facts, and these are facts. We have studied the whole subject long and carefully, and the figures are not ours, but are official returns. To those who delight in estimates (wind), we would cite the cases of the Agricultural Department at Washington v. the State of India. In 1873 the Department estimated the barley crop there at 568,000 bushels. The amount actually raised was 199,140 bushels; difference 368,860. In 1874 the estimate was for 539,000 bushels, and what was actually raised was 261,233 bushels; difference 277,767. In 1875 the estimate was for 440,000 bushels, and the crop yielded 149,935; difference 290,065 bushels. And that is about as near as they usually get in such wild calculations."

TESTIMONIAL TO MR. HENRY CORBET.

Readers of *The Mark Lane Express* especially will be glad to learn that at the last meeting of the London Farmers' Club, it was proposed that a testimonial should be presented to Mr. Henry Corbet—for many years Editor of this Journal and Secretary of the Club—in recognition of the important services which he has rendered to agriculture. The proposal was warmly received and liberally responded to, a large proportion of the members present putting down their names as subscribers. It is unnecessary for us to enlarge upon Mr. Corbet's credentials to such a mark of appreciation from agriculturists. During a long public life he served their interests with zeal, courage, and independence; never fearing to expose abuses in whatever quarter he detected them, he necessarily made some enemies as well as many friends; but illness has now, unhappily, removed him from any active participation in public affairs. Mr. Corbet suffered a heavy pecuniary loss shortly after the commencement of his illness, and for this reason the testimonial will take the form of a sum of money, which it is earnestly to be hoped will be sufficiently large to replace the sum which he had invested as a means of support in his years of retirement, but has unfortunately lost. Small sums will be welcome from those who cannot afford to contribute largely. Subscriptions may be sent to Mr. Druce, Secretary of the Farmers' Club, at the Caledonian Hotel, Adelphi-terrace, W.C., or to any member of the Committee of the Club.

SMITHFIELD CLUB.

A council meeting was held at the Agricultural Hall on Wednesday, November 7th. Present:—The Right Hon. Lord Walsingham, President of the Club, in the chair; Messrs. Hugh Aylmer, Thomas Brown, Edmund Beck, T. C. Booth, Joseph Druce, Walter Farthing, Henry Fookes, Robert Garne, Hugh Goringe, John Giblett, Richard Garrett, Thomas Horley, jun., Charles Howard, Robert Leeds, Henry Masfen, Henry Overman, E. Paddison, Joseph Stratton, H. Trethewy, Henry Woods, Henry Webb, Jacob Wilson, Hon. Secretary.

The minutes of the last Council meeting were read and confirmed. The report of the Steward's on deferred protests at the last Show and recommending that no certificate signed by Mr. Chapple, the bailiff to Captain Taylor, be received in future, was received and adopted.

The Hon. Secretary was authorised to take any necessary steps that might be required for holding the show, in accordance with the orders of Privy Council (if any). It was resolved to make application to the Privy Council for permission for any exhibitors who may wish to remove their animals from the show into the country, to be allowed to do so on the certificate of the Veterinary Inspector, and under a licence, to be granted for such purposes, and that the slaughtering of such animals be not compulsory.

The Committee for making arrangements as to cattle conveyances, for carrying stock to and from the show, disinfecting, etc., was re-appointing.

It was explained that the cause of the high charges made by the owners of cattle conveyances, was in consequence of the vehicles being handed over to the custody of the club for some days, for the purpose of being disinfected, and their not being allowed to be used for any other purpose, and also that the vans and men are detained for a long period at the Railway stations awaiting the arrivals of the Show animals.

The house list of sixteen names was prepared, from which the members will select eight to replace those who retire by rotation, and are not eligible for re-election until after the expiration of one year.

Three scrutineers were appointed to examine the voting papers for the new members of Council in readiness for the result being announced at the general meeting in December.

It was resolved that no animal can be exhibited at the Smithfield Club Show this year which has been exhibited elsewhere after the 1st November, 1877, and that a special circular be sent to all exhibitors to this effect. A communication on the subject of judging Devon cattle, and the future issue of the Devon Herd Book was laid before the Council, and the Council expressed its opinion that all Devon cattle are qualified for the Clubs' prizes. A communication from the Oxfordshire Agricultural society on the subject of cattle plague was laid before the Council.

Several letters were read and replies ordered to be sent:

The following new members were elected:

His Grace, The Duke of Manchester, Kimbolton Castle, St. Neots.
The Right Hon. the Earl of Darnley, Cobham Hall, Gravesend.
The Right Hon. the Earl of Jersey, Middleton Park, Bicester.
William Arnold, Salisbury-street, Blandford.
Edward W. Beck, Oxwick, Fakenham.
Charles Chapman, Frocester Court, Stonehouse, Gloucester.
T. Cruickshank, Sittytton, Aberdeenshire.
Arthur W. Crisp, Oxford, Wickham Market, Suffolk.
P. Everitt, Ryburg, Fakenham.
Alfred Field, Leam, Leamington.
Mrs. W. Perry Herricks, Bean Manor Park, Loughborough.
Edmund King, Ashley Hill, Newmarket.
G. H. Pinchard, Coombe Court, Witley, Godalming.
C. L. Sutherland, Coombe, Croydon.
G. N. Tucker, 79, Mark-lane, E.C.
W. Tulloch, Slangham Park, Crawley, Sussex.
Sir H. Verney, Bart., Claydon House, Winalow, Bucks.
W. F. Watson, Redless, Isleworth.
Walter Wren, Grazeley Court, Three Mile Cross, Reading.
John J. Watts, Whistley Farm, near Devizes.

After a vote of thanks to the president for his able conduct in the chair, the council adjourned to the Tuesday in the week of the Show.

THE RANCHE OF MR. ALBERT CRANE, DURHAM PARK, KANSAS.

TO THE EDITOR OF THE MARK LANE EXPRESS.

Mr. Crane gave me a kind invitation to visit Durham Park, and examine his extensive herd of Short-horns. Abilene is the station from which he generally ships his stock; therefore the road across the extensive prairies was quite familiar to him. For the first eighteen miles settlers are dotted in every direction, principally Germans. The last passed was an Irish settlement. There is a great deal of hedge planted, very little of it being more than three years old. The spring plantings and yearlings look very thrifty. For the remaining ten miles we did not see a house, neither was there any track but the one that led to the ranche, and this was solely made by the traffic to and from Abilene, to serve the purpose of Mr. Crane. The heavy loads drawn have made many deep holes, sufficiently so to give us a shaking when the mules did not choose to halt. Mr. C. seemed to be posted in the worst spots, broke ground on the prairie to avoid them, and in bright moonlight we reached the ranche in a little less than four hours—a distance of 32 miles. The fences are principally of board and wire. The stables for stock are temporary, but well arranged and comfortable. There is a division of these on each side of the creek, a clear stream that waters every lot, fed by frequent springs running into it. There is one under the shade trees bordering the creek, as clear as crystal, and nearly as cold as ice-water. This creek is fed by many such springs. Here the bulls are led to water, and the cattle have access to it in all directions. The whole ranche contains 10,000 acres, different from much of the prairie soil I have met with in Kansas. It is a beautiful sandy loam, not so strong as the darker soils, and it produces well. There are numerous tenants, who give a third of the produce for the use of the land, and bind themselves to sell to Mr. Crane at a cash market price. Outsiders sometimes bring in corn and oats. These tenants confine themselves to raising corn and oats, and the crops cultivated by Mr. Crane vary but little. A patch of four acres of pumpkins has produced the greatest bulk of succulent food that I have seen for a long time. The clover hay, cut early at both cuttings, is very fine, producing a ton and a half at each cutting. Mr. William Watson is the superintendent here; he is from Kilmory, Scotland. I met him at the stockyards at Chicago in 1872, when on his way to Oregon with Mr. Read, with a fine herd of imported Shorthorns of his own selection. The following week I was on the Shorthorn Committee with him at the St. Louis Exposition, and as our judgment corresponded we seemed like old friends well met. Mr. William Watson is considered an excellent judge, and also a very intelligent practical man. He has been a pupil of Mr. Wetherall, Mr. Bates, Mr. Booth, and Mr. Torr, and is now decidedly a Booth

man. Being well versed in their secrets of breeding and feeding, he is thoroughly competent to aid much in the enterprising institution, which is a great boon to the West, and will ultimately be the foundation to all beef producers West of here. I tried to get Mr. Watson out on "the Bates' West Island cross," but he was reticent. I have always said that the Wileys bore a strong cross, and that all who knew both breeds must acknowledge it. Mr. W. could not deny it. I contend that the Duchesses of fashionable frame have been made by the same cross, and are a decided improvement on the Bates herd shown at the Royal Agricultural Show at Oxford in 1839. Where this cross nicks well it is far superior to Bates' original Duchess of that period. The Duchess heifer bought in by Major Lippincott at his and Mr. Speers' sale at Chicago looked much more like a West Highlander than a Shorthorn, her colour (spotted), shape, and cocked horns tipped with black, all resembling the former breed. No one conversant with both breeds could be deceived by her, regardless of pedigree. I consider the cross an improvement, and so did Thomas Bates. The one made by Colling, through the red Galloway heifer, was another improvement, and done to reduce his herd's coarseness. He was candid enough to confess it, and Booth acknowledged it in his herd. Bates condemned all "alloy," abused Mr. Booth, and was continually endeavouring to lower his herd in the estimation of the public, after he found that Mr. Booth was winning all the prizes at the Royal and other Shows over him. It is now shown by his own confessions that he had far more "alloy" than Booth; and has produced more black noses. Bell on Bates tells the whole story, I do not blame Bates for making these improvements; but I utterly condemn him for keeping it out of his pedigree. Weigh this, ye pedigree men, and inwardly digest it! Mark the good points of your future sire, which is the mainstay of your herd. Do not let pedigree influence you to use a sire of inferior points. I hold to the old maxim that "Like produces like." Many a good herd has been ruined by the use of fashionable pedigree bulls, while many a one has been improved by bulls of far less note. I condemn a large, bony, coarse bull however fanciful his pedigree, notwithstanding the Western trade now calls for such. The day is not far distant when a change will come. They will ultimately find out that paunch, inward fat, and coarse bone will not be so ready a sale as compactness, quality, and heavy flesh, and we all know that fashionable bulls have been heirs to the former. Booth and Bates have been held up as patterns of breeding, while there are others equally good, and I consider mixed pedigrees better than those called "pure." I never saw better animals than a mixture of Booth, Bates, and Stevenson, all noted for their skill, and I find

all these breeders' names in the pedigrees of this herd, which I will endeavour to describe to the public. I am much indebted to the kindness of Major Crane, and the assistance of Mr. Watson in giving me an opportunity of a thorough examination. The first bull brought out was Lord Abraham, a Booth bull of great substance, beautiful symmetry, and great constitution. He has proved himself a good improver. His stock is uniformly good, and full of high character. Richard Booth would say of him "He is as round as a wool-pack, and full of meat." His stock are the right sort to send to Colorado, as they will feed on grass alone, and, when they get to market, fetch the top price. Large, coarse, paunchy, bony bulls cannot effect this; therefore a change is necessary, and it will ultimately come. Lord of the Lake is another Booth bull. Bates men would call his a "sweet head." He is not so fleshy as Lord Abraham, nor has he so much substance; his ribs are not so well sprung, but he is of first quality, and his progeny place him high in the rank of producers. Major Crane has a high opinion of him. He is very stylish, and will please men of fashion. Royal Lancaster is one of the highest bred Cambridge Rose bull's in existence. Although he is heavy-fleshed it is a little soft, is very stylish, shows great constitution, and his offspring inherit his good qualities. He has been a great prize-winner in England. Lord Bates is white, a pure Bates, by 24th Duke of Airdrie, dam Miss Bates 3rd. This bull is my type of a Shorthorn, and a model for sires. Such a bull will not only get good heifers, but very superior bulls. I never saw a more uniform lot of more excellent quality calves from any bull, and I should advise his use as far as consistent, regardless of pedigree. Such a bull generally transmits valuable faculty to his progeny. Where Lord Bates got his prominent neck-vein, well covered shoulder points, blades, and full crops from is a mystery I should like to have explained. But this matters not; they are there, and his stock inherit them. Such a bull is invaluable. Two heifer calves by him are as complete as flesh, blood, and bone can make them. The roan is from imported Seraphina, the white from the grand old prize winner imported Joan of Arc, purchased at Messrs. Avery and Murphy's sale. We had a long consultation to decide which was the best, and concluded that Joan's Lilley should bear the palm. We then looked at two of the young bulls, both roans. One was precisely of the same stamp in symmetry and quality, and the other differed but little. Both will certainly make their mark, and look promising to prove as valuable as their sire has proved. Knight of the Crescent and Knight of the Purple, sons of Imperial Telluria Wassail—the cow Mr. Crane purchased at Mr. Torr's sale—one by Knight of the Shire the other by Lord Abraham, are very promising young Booth bulls, and, like all the Booths, are full of heavy flesh. Water Sprite and her yearling heifer are very good, but Waterloo, a pure Booth cow, is the gem of the aged cows. Imperial Flower Cherry is not far behind her. However, I think I may safely say that I never saw so fine a lot of Booths together in this country, and

I am satisfied that Major Crane, who is well posted and a capital judge, has become a confirmed convert to Booth notwithstanding they have two heifers of the Duchess that cost 43,000 dols., and their two heifer calves, of the Bates blood. I remarked to the Major that they had fifty cows and heifers far better than the high-priced Duchesses. "I know it," he replied, "but we started here with the determination to have cattle to meet the views of all Shorthorn breeders, and we have some of the best blood, and that of the most fashionable, running through the veins of all of them. My father was determined to get the best that could be found, and price never stopped him. The past year I have sold 68 head of Shorthorns at private sale, and have now over 200 thoroughbreds." There are 100 head of grade Shorthorns, 500 head of cross-bred hogs for pork, 150 Berks hires, boar, Knight of Bath, winner of the first prize at the Bath and West of England Show this year, and sows winners at the Royal also. There are 2,500 acres under cultivation, 40 miles of board and wire fence, and a windmill of 10-horse power to grind all the feed. There are large corn cribs around the mill to receive the corn as it is delivered, one now containing over 2,000 bushels of old corn. A large oat granary, with capacity to hold 10,000 bushels, contains at the present time over 6,000. He has a pair of large stag-hounds on the place, for the purpose of catching antelopes and the prairie wolves, many of which are often seen here. There are also a school-house and a post-office, the Major being Postmaster. The mail is brought twice a week. A letter came last evening that called the Major to Abilene early in the morning. He was going to start on horseback and leave the mules for his brother to drive me in the morning. I asked him if he liked riding on horseback better than driving, and he said not. "Then let me go with you to-night; the moon shines brightly." "You cannot stand it, to ride over those pitch holes in the night." "I can stand it as well as you can, Major, so let us try it." The Major said "I shall shake you all to pieces." "I'll risk it," I replied. At length the Major consented, and we both got behind the mules. These mules would go from morning until night at the rate of eight miles an hour. They could not get out of the road, for there was but one track. Sometimes we would drop into a deep pitch-hole, and the Major would look round to see if I was at the side of him. "Oh, Major!" said I, "such holes can't pitch me out; don't be alarmed." He found that I could stick close by the side of him, so he increased his pace. We frequently got a shaking, but arrived safely in Abilene at two o'clock in the morning, behind the best pair of mules I ever sat behind. We expected to see some antelopes and prairie wolves on our way, but not a vestige of either appeared. Mr. Albert Crane, the founder of this ranche, has done very much for the Shorthorn cause, and although he "has paid dear for the whistle" in the Duchess heifers, he did not run in debt for them, and thinks there are some fancy men left who have been "born with silver spoons in their mouths," and have ridden the Duchess hobby so long that they are

determined to keep the prices up. Mr. Watson has tried experiments on 13 varieties of grasses, all of which have proved successes, the orchard grass and rye grass doing the best.

I am, sir, yours, &c.,

WM. H. SOTHAM.

Durham Park, Kansas, Oct. 23.

PRESERVING EGGS.

TO THE EDITOR OF THE MARK LANE EXPRESS.

SIR,—Observing in your paper a note on the process of preserving eggs recommended by the "National Butter and Cheese Association," it occurred to me that it might be interesting to your readers to know that the matter was very fully investigated over a hundred years ago. I extract the following from an old book entitled "Chemical Works of Kaspar Neumann, M.D., Professor of Chemistry at Berlin, F.R.S., &c. Translated by William Lewis, M.B., and Fellow of Royal Society, London, 1759."

"Eggs are commonly preserved by packing them up close in bran, sawdust, or other like substances. I kept one in salt-water from May to November, and notwithstanding the warmth of the season, and that of a fire occasionally, it continued perfectly sweet, but the yolk was little harder than that of a fresh egg, and the white had received a slight saltish taste, a proof of the porosity of the shell."

"M. de Reaumur has discovered that eggs may be preserved perfectly sweet for years by rubbing them as soon as laid with fats, oils, or other unctuous substances, which by preventing their perspiration prevent their corruption. See his 'History of Insects,' Vol. II., the Memoires of the French Academy of Sciences, for the year 1735, and his 'Practice of the Art of Hatching and Bringing Up Domestic Birds.'"

"From some experiments I have made on this subject appears that solid fats impede the perspiration greatly, but soft fats and oils not near so much. The principal of these experiments are as follows:—"

NEW LAID EGGS.	Perspired in 3 months.
Steeped twenty hours in rectified spirit of wine, and then hung in a dry room.....	1-9th
Kept in bran	1-10th
Kept in sand	1-12th
Dipped in oil, and kept in a tin box closely covered.....	1-90th
Dipped in melted fat, and kept in bran ...	1-274th
Kept immersed in rectified spirit of wine...	Nothing.

It will be observed by perusing the foregoing that as early as 1759 the now common method of preserving by covering or immersing the egg in oils or fats was not only well-known but the comparative preservative effect exerted by various substances was shown by scientific experiment to be in inverse proportion to the amount of water that the egg lost, the expulsion of water permitting the entrance of air, and thus allowing of decomposition. I

myself have used oils and fats for the preservation of eggs with considerable success, and can fully bear out the fact shown by the above experiments that oils or thin fats are immensely inferior to solid fats or waxes—a fact, I believe, which is very often overlooked.

It might be thought at first sight surprising from the known attraction that strong alcohol has for water, that the egg immersed in spirit lost nothing; but we can quite understand it if we bear in mind the fact that when alcohol and water are separated by a membrane and under atmospheric pressure, the water passes freely into the alcohol, while the alcohol displaces the water to a very small extent, and in this case therefore sufficient alcohol might not be able to pass through the membrane into the egg to replace the water, and it is highly improbable that the water would cause a vacuum by passing out unreplaced, especially when mixed with an undialysable substance like albumen, and consequently the egg would remain of the same weight.

I am, sir, yours, &c.

A. ANTHONY NESBIT, F.C.S.

Laboratory, 38, Gracechurch-street,

London, E.C., October, 27.

IRON SHEEP HURDLES ON WHEELS.

TO THE EDITOR OF THE MARK LANE EXPRESS.

SIR,—The wooden age is passing away—coal, steam, and iron are becoming "the order of the day."

If (and there is a great deal of meaning in that word "if") farmers are to farm as profitably as Mr. Mechi does, they must have Iron Sheep Hurdles on Wheels, notwithstanding the opposing advice of what is called, or was called, "A Practical Farmer," for it is not practical or wise to save or earn only a shilling when you might, could, or should gain one shilling and sixpence.

I speak, now, of the close folding of sheep and lambs, and the removal twice daily (morning and evening) of the sheep-fold on to fresh ground, which is my custom. But then the much-beloved and long established roaming-at-large system must be discarded, despite the attraction of ancient but mistaken practice.

The pangs of separation will soon be alleviated by increased profits, but I will say no more, except to mention that all I have written about it may be found in my three volumes of "How to Farm Profitably," published cheaply by Messrs. Routledge and Sons, Broadway, Ludgate-hill. If I were to propose to "practical farmers" that their food (supposing that it would keep good for many days or weeks) should be used for beds, exercise and excretal deposits I should be considered very sheepish, and, perhaps, somewhat nasty, and yet this is the common custom with our farm animals. I hope that this illustration may suggest a more decent and profitable practice; but then, dear sir, pray forgive me, for I plead guilty to being merely an apron-string farmer, who, for thirty and more years, has practiced and recommended what he believes, and still believes to be, in this matter, "the correct card."

I venture to recommend to our iron friends to make their hurdles strong (stronger than many are made), because iron is now very cheap, and there is, especially on stiff clays, a considerable horizontal pull or strain upon them when three or four are hooked together, and drawn by a horse. My oldest ones (in use 30 years) have each horizontal bars strongly rivetted to the upright bars, and the iron is of good substance. "Cheap Jacks" are unsuitable, for they would be much too frequently at the blacksmith's, and we know that the extra weight of iron does not increase the labour in putting them together. Mine are 15 feet long, three feet high from the axle, six horizontal bars, including the axle, and six upright bars. Sheep can get their heads between the lower bars, so as to feed when we mow long grass, and place it outside the hurdles. Wood hurdles are of little or no use on our clays in dry or frosty weather. Our iron hurdles weigh 160 lb., including wheels.

Well-fed sheep rarely top these hurdles, but it is a hard matter to keep half-starved animals within any kind of fence.

I am, sir, yours, &c.

J. J. MECHI.

Tiptree Hall, Kelvedon, Essex, Nov. 8, 1877.

HEREFORD HERD BOOK SOCIETY.—The first meeting of Council was held in the Council Chamber, Guildhall, Hereford, on Saturday, the 10th Nov., under presidency of J. H. Arkwright, Esq., president for the year. There were present: Sir J. R. Bailey, Bart., M.P.; W. Stallard, Esq. (Mayor of Hereford); Messrs. H. J. Bailey, S. Robinson, J. Pauley, W. Badham, W. Taylor T. Fenn, J. Hill, P. Turner, W. E. Britton, W. S. Powell, T. Rogers, T. Cadle, J. Yeomans, A. Rogers, T. Duckham. Letter read from the Right Hon. Earl of Coventry accepting the office of vice-president, and regretting his inability to attend the meeting. A Committee was appointed to prepare articles of association and consider a general scheme for the management of the Society to be submitted to the Council at a future meeting. An account was ordered to be opened at the National Provincial Bank in the name of the President. Mr. Duckham was appointed Secretary *pro tem*. The following new members were reported: The Right Hon. Lady Emily Foley, Stoke Edith, E. Pateshall, Esq., M.P., Allensmere Court; Messrs. J. P. Apperley, Fawnhope, Hereford; W. Price, The Vern, Leominster, and G. E. Drinkwater, Treribble Ross. Life members: Messrs. G. T. Forester, High Ercall, Salop; R. H. Ridler, The Boar, Hereford; B. Farr, Much Dewchurch, Hereford; C. J. Searle, St. Austell, Cornwall; E. J. Smith, Gattertop, Leominster; E. Bowen Crofton, Salop; J. Vaughan, Downfield, Kington; W. Baldwin, Underley, Tenbury; J. Like, Mansell Lacey, Hereford; W. Brown Lewstone, Monmouth; J. T. Ockey Bishop, Froome, Hereford; G. A. Stephens, Greenwood, St. Dolougha, County Dublin; and Messrs. Millward and Urwich, Ludlow, annual members.

At the instance of the German Post Office, a law has been passed inflicting three days' imprisonment, and a fine of 30 thalers, upon any person convicted of sending Colorado beetles through the post.—*Coming Events.*

COMPARATIVE PATHOLOGY.

Mr. Henry W. Acland, Regius Professor of Medicine in the University of Oxford, writes as follows to *The Times*:—

In *The Times* of November 3, your correspondent, Mr. Fleming, in an interesting letter, complains of the too scant study of comparative pathology in Great Britain. It is not for me to dispute this allegation, nor am I quite sure, looking at the papers in *The Veterinary Journal* and those published by the Royal Agricultural Society and elsewhere, but that I should admit the charge as fully as he makes it. That there is yet room for progress in this as in every department of biology no one can doubt. It may, therefore, interest your readers, as well as your correspondent, to know that the question of founding a Chair of General and Comparative Pathology, under conditions, has long been before the University of Oxford. It has been quite recently pressed in a practical form on the Royal Commissioners, who have been sitting here, and it is to be hoped the proposal may be successful. It is hardly possible that veterinarians would mistake the suggestion for one to found a Veterinary Chair, which would be far too limited in its scope. But lest that should happen, it may be added that it has been thought desirable not to forget that, in completing arrangements for the scientific study of human and comparative biology, the study of the general relation between the diseases of animals, and those of man—general and comparative pathology—could not be omitted. The decay and death of animals are as much a part of their natural history as their birth and their growth. The mass of knowledge which is accumulating as to the pathological states of animals lower than man, and as to the bearing of that knowledge on man, is too well known to require observation. The foundation of a purely scientific chair in this place for promoting inquiries and co-ordinating results in this direction could not but secure great practical good. Nor are the men wanting who can grapple with so vast a question, and fill the office with honour and advantage to the world.

ENSILAGE AND PRICKLY COMFREY.—Mr. Henry Doubleday, writes to *The Chelmsford Chronicle*:—In the book on "Forage plants," by T. Christy, mention is made of the plan adopted by the French for preserving green food for winter use, and which they style, "ensilage." Although I had read this account I did nothing in it till quite lately, and then only commenced by accident. I was cutting a larger quantity of the tops of the solid stem comfrey than my stock could consume fresh and green, and the surplus was placed in cocks. These soon heated, and after standing some time I gave these heated leaves to my stock, and found they were extremely fond of them. I then made a further trial, and put into a wood tank about half a ton of green comfrey leaves and trod them well down. These also soon heated and settled down into a mucilaginous pulp, and I have been most successful with my new food and find that cattle take to it most kindly. I am now trying the fattening properties of the green comfrey leaves and this sour keep, by feeding a bullock upon them with an occasional bit of the sort of which he is very fond. I am quite astonished at the result of my trial of prickly comfrey as a fattening food. I give my bullock some cut straw and 2lbs. of barley meal daily. Some farmers were looking at him last week, and could hardly believe but that he had been fed with oilcake.

FARMERS' CLUBS.

CENTRAL.

THE PRODUCTS OF THE DAIRY.

The first meeting of the Farmers' Club, after the usual summer and autumnal recess, was held on Monday, Nov. 5, at the Club Rooms, Caledonian Hotel, Mr. J. J. Macchi in the chair. The subject fixed for discussion, viz., "The Products of the Dairy," was introduced by Mr. G. M. Allender, of Belgrave Mansions, Grosvenor-square.

The CHAIRMAN: Gentlemen, I have much pleasure in meeting you here again to-night. I wish I could congratulate you on the improved condition of British agriculture. But, speaking as an honest man, and in a straightforward spirit, I am bound to say, having regard to the condition of the whole of the agricultural region, that there has been another year's loss and misfortune (Hear, hear). Some exceptions may be made in favour of our grass-land friends, but in regard to arable farming no doubt this has not been a prosperous year. Gentlemen, permit me to mention, among doleful matters, that our late Secretary, Mr. Corbet, is in a very bad state of health, quite unable to help himself. To-day the matter was talked over, and, knowing his manners and necessities, the Committee subscribed a sum of one hundred guineas on the spot (cheers), and I am requested to mention it here (renewed cheers). We shall be very glad indeed to see this effort followed up by other subscriptions. Subscriptions would be received by Mr. Howard, or our Secretary, Mr. Druce, or by any member of the Committee. Mr. Corbet has been very unfortunate. I need not say how hard he has worked for this Club (cheers). Unhappily his health has given way under the strain of mental exertion. Now we come to the business of the evening, and I have great pleasure in introducing Mr. Allender (applause). He most kindly invited the Committee to examine his dairy near Notting Hill, and I may say I, for one, amongst others, was surprised to find how different it was from what used to be the condition of dairies in London, with their few milk pails and Welsh maids carrying the pails about. Here we saw that a very large capital had been invested in the purchase of ground upon which to erect an extensive range of buildings where steam-power and all the best mechanism are brought to bear on the most improved methods for the purpose of receiving the milk, keeping it in proper condition, and despatching it in proper condition, of course taking care that the quality is good up to the moment of delivery. We saw five-and-twenty machines started with the requisite number of hands, everything being regulated with as much order as you would march out a regiment of soldiers. Twenty-five horses are kept, and there are 120 attendants. But I am afraid I am anticipating what Mr. Allender has to say. However, I may add that many of the attendants are lodged on the premises in dwellings erected for them. It will be evident from

what I have said that here great progress has been achieved. And this is in harmony with the improvement noticeable in the general condition of the country. Our manufactures are improving, and I must say that, thanks to the able management of our friend, Mr. Allender, our dairy arrangements are also improving (applause).

Mr. ALLENDER then read the following paper:—

In introducing the subject set down for discussion this evening, I must ask the members of the Club to clearly understand that I do not pretend in any way to be able to teach those who have had much greater experience than myself, indeed, I have to confess that in some branches of dairy-farming I am a total novice—cheesemaking, to wit—still I felt that the subject required ventilation, and I trust the few words I have to say will be followed by a discussion in which those who are far more able to teach than I am will join. I start with the firm conviction that dairy-farming would be found far more profitable than it is supposed to be if entered upon on a large scale, made a thorough business of, and all modern improvements and appliances introduced. Dairy-farming in England has undoubtedly been greatly neglected; I do not think that can be disputed. In the first place it has not been fashionable, and it is said, "to be out of the fashion is to be out of the world." When I say "fashionable" I mean that few of our great agriculturists have ever thought it worth their while to enter upon it; it has been looked upon as the occupation of "the little men," and has been confined to certain districts where grass-land predominates. In my opinion cows are more profitably kept "off the grass." Doubtless dairying has not been in vogue with the larger and more wealthy farmers on account of that personal and immediate supervision and attention which it requires, almost as a manufacturing business, and which the great farmer has looked upon as irksome. Not, therefore, having been "fashionable" with the leaders of the agricultural world, it has been proportionately neglected by our national Societies. It is true that a few prizes are occasionally given by the local committees when "the Royal" has been held in an essentially dairy district, but nothing like a general recognition of the importance of the "products of the dairy" has been admitted. Local Societies in dairy districts provide classes for milch cows, butter, cheese, &c., but few of the small Societies have any influence, and with the constantly increasing means and taste for "getting about," and the ever-growing tendency for big things to become larger, and small things less, the local Societies, as a rule, decrease in popularity and the number of entries become smaller, while year by year the entries at the national Shows are more numerous. I was greatly impressed with this when last year, at Aylesbury, I think the number of entries for butter did not amount to a dozen. It is, therefore, to the great agricultural Societies and to the noblemen and gentlemen who control these Societies that we must look if the products of the English dairy are to compete with the foreigner. It is true that a so-called Dairy Show has been twice held at the Agricultural Hall, but these have been only "gate money" speculations, and not very successful ones either, alternating with exhibitions of American pedestrians, performing dogs, or the tricks of the ring of Sanger's clowns, or dancing elephants—anything, indeed, to catch the Cockney's shilling—as a cheese fair, and I

confess the exhibition was excellent. I can understand that part of the speculation, but that one of the most important branches of British agriculture should be prostituted to such uses seems detestable, and that foreigners, and indeed our own people, should be asked to look upon such a lamentable failure as that lately held as *the Dairy Show of England*, is a miserable imposition. No one has done greater service in the cause of British dairy-farming, or more to draw attention to the rapid strides that are being made in other countries, than the painstaking Secretary of the Royal Agricultural Society of England. Mr. Jenkins has contributed paper after paper on the subject, sometimes treating of the systems pursued in dairy districts in England, at others, and especially in his later papers, giving most interesting descriptions of the great advance in dairy management which is taking place in the north of Europe, Denmark, Jutland, Holstein, &c. In the "Journal" for 1873, page 349, in speaking of a butter factory established at Copenhagen, he says: "The butter commands high prices in all quarters of the globe," whereas he further tells us that Mr. Rainsals, in 1830 stated that "the butter made in the district was execrably bad, and that it appeared strange that such produce could find a sale." Mr. Jenkins then explains how this great change has been brought about, viz., by the exertions of and attention given to the subject of dairy management by men of talent and position. Similar influences are at work in other countries, Sweden, where Professor Muller, now removed to Berlin, did so much, Germany, Austria, Bavaria, Switzerland, and France, not of course forgetting America. Dairy schools are to be found all over Europe in which instruction is given by men of the highest intelligence. It is true that most of these schools are supported by the Governments of the various countries, but that is merely a matter of custom. In England we do not look for "State help;" we have our Societies and institutions of all sorts to promote improvements and advance, and it is to our great agricultural Societies that we must turn if British dairy farming is to hold its own. I do not hesitate to say that the work of the dairy, whether it be the production of cheese or butter, requires greater attention and more careful observation and management than any other branch of farming. No article with which the manufacturer deals is more delicate or subtle than milk, and especially when it is a question of cheese-making. I am not a practical cheese-maker, and I do not for one moment pretend to be any authority on the management of a cheese dairy, but I do know sufficient to be aware of the careful and attentive manipulation that milk—the most delicate of articles—requires. Nothing more clearly proves this than the immense difference which is to be found in the quality of cheese made in different dairies in the same district, and now, when perhaps a dairy has been celebrated for years, a change in the management makes an immediate alteration in the value of the product. Or, for a stronger proof of how susceptible milk is to the most trifling influences, look at the varieties of cheese that are to be met with; and, although all of these have had starting points in common, when fit for use how they differ in character—all made from cows' milk, all treated by the addition of some acid, generally a preparation from the stomach of the calf, in order to obtain a separation of the casein from the whey. Endless varieties of results are obtained, in most cases, by simple differences of temperature during some period of the manufacture. In Switzerland, Italy, and other parts of Europe almost each village has a cheese peculiar to itself. But whereas a few well-managed

dairies where the farmer, or frequently his good wife, made cheese of the highest excellence sufficed for the requirements of the high-class consumer, and many such dairies still exist, where cheese is made that for quality and flavour may defy the world, the increased demand arising from improved taste, and the larger consuming power of our immense population, necessitates an enormously greater supply. The advance in wages, the difficulty of obtaining dairy servants, and the disinclination of farmers' wives and daughters to take their share in the management of the dairy increase the difficulty of meeting the demand from home sources, and the rule-of-thumb, hit-or-miss, practice of former days must give way to a more scientific and less wasteful system. Formerly, inquiring minds from other countries came to England to study our system of dairy management, and returned home to put in practice the lessons they had learned and to improve upon our methods. Our Cheshire cheese and Aylesbury butter were the representative products of the English dairy. To this day all English cheese, that is, all "hard" cheese, as distinguished from the immense variety of cream, or "soft" cheese on the Continent, is called "Fromage de Cheshire." It is a good sign, however, for us that we are now seeking information from our former pupils, and that the factory systems of the United States and of Northern Europe are being introduced—not that I think the factory system is in any way imperative in order to obtain excellence, but that it is more in accordance with the age in which we live, and that it is more convenient to men of small or moderate holdings to be able to send the produce of their dairy to a factory to be made up. If I were farming largely, and it is the large farmers that would find dairying pay, I would manufacture at home undoubtedly. The appointment of Mr. Sheldon at the College at Cirencester is a good omen. Mr. Sheldon has visited the United States; he has studied and ably written upon the system in use there; he represented the young Association of British Dairy Farmers at the International Dairy Exhibition held at Hamburg early in the year; and he is undoubtedly one of our best authorities on dairy subjects. I greatly regret that I was unable to visit Hamburg during the Show, as from Mr. Sheldon's account the exhibition must have been exceedingly interesting; but I have been several times on the Continent this year, principally in France, and I have been not only greatly interested, but astonished, at the enormous business the French dairy farmers, small as many of their holdings are, are doing. Their great industry, economy, and the part their wives take in the work are the secrets of their success. One visit I paid was in the district where the small cheeses, known here as *Bondons* or *Neuchâtel*, are made. I was met at the station by my host's son, a bright boy of 12 or 13, who told me his father was at the goods station. Thither I went and found my friend, dressed in the everlasting blue blouse, in his cart, unloading hampers of cheese, some going to Paris, others to London, and others again to a neighbouring town for the next day's market—his wife on the platform taking account of the packages. All made right, away we went to breakfast, and a right royal meal we had—then round the farm and over the cheese dairy. My friend passes through his dairy over 60,000 of these cheeses per week. It is true that they are only worth some 2d. each, but that mounts up to some £500. The market he was to attend the following morning commenced at 5 o'clock and was over by 8. Expressing a wish to see a particular sort of cheese made, I found that I should be just in the neighbourhood if I attended this market. So I got there a little after 8, having some forty miles to travel. I found M. Lefevre, my host of the previous

day, had finished his business and had sold 11,000 cheeses. He introduced me to a friend of his who had a large dairy near and who made the cheese I wished to see, and was invited to visit his farm. We walked on, and presently my friend No. 2 overtook us, dressed in his blouse, driving his own large market cart, with three or four of his men, returning from market by eleven o'clock in the morning. We turned into his yard—a fine old place; his wife was superintending the hanging out of the clothes, it being washing-day. Breakfast over, we went to the dairy. There we found some thirty people, all busy making up the cheese, of which M. Pommel, for three months of the year, sends out 40,000 dozen per day—nearly half a million. He farms 800 acres of his own land, keeping a fine herd of cows, buys the milk of some 1,500 cows in addition, and is reported to be worth his 2,000,000 francs—£80,000; and yet his wife, daughters, and himself were all busy in the dairy—and so it is through France. No wonder they paid the millions to Germany so easily. Then the butter trade all through Normandy—and such butter—Gournay, a great centre for Normandy butter, is a sight to see on market day. Now, the land is not better than any we have in England, neither are the cows. Why do we have to pay the millions a year we do for dairy products when our own land might produce so much more by better management? I am brought into contact with a great number of English dairy farmers, and although many of these gentlemen do their business as men of business—and from the quantity of produce they send to the Company with which I am associated, they must be farming well—I meet with far too many instances every year where I know the system pursued is most miserably wasteful and short-sighted. A farmer wrote to me last winter, when we complained of the small quantity of milk he was sending us, that he could not get a living unless he kept his cows *cheaply* in the winter. *Cheaply!* What a mockery! Dearly, wastefully, extravagantly, would have been more suitable terms. He was starving his cows, and when I came to make inquiries I found that although he had excellent buildings and every accommodation for housing his cattle, the poor wretched animals were all out, and that not only did the wise man not expend a sovereign in cake or other food, but not until after a cow had calved did he give her a bit of hay. Such a statement seems incredible. It is in the attention to and study of manipulation that the foreigner beats us. During the present year I have had visits from a great many foreigners, who had come to England to gain information as to the management of our English dairies—Swedes, Germans, French, even from South America, also Americans. I don't know whether any of these gentlemen picked up any wrinkles from me, or from what I had to show them; but this I do know, that I derived information, frequently valuable information, from most of them, the Germans and Swedes especially. The former come with a whole string of questions, carefully prepared and written out beforehand, in the most methodical manner—asking for information upon such minute points that I have sometimes felt like a schoolboy saying his lessons, and with a vague sort of idea that I should be sent to the bottom of the class for not being able to answer them all. Several of these gentlemen expressed their astonishment that dairying was not thought of more importance in England than they found it to be. An American told me that nothing had disappointed him so much as the absence from our large Shows of milch cows! and Dr. Breymann, from Cologne, who was here on a mission from the German Government as to the supply of milk to towns,

and whose brother is Professor at one of the Dairy Schools in Sweden, fully agreed with me that a milking cow produces, under proper management, more profit to the farmer and food to the nation than a fattening beast. Now, as to what profit can be got out of a cow. Of course, I presume that the farmer be an intelligent man of business. As such he proposes, in going in for a dairy of cows, that the best and biggest animals that can be procured are the most profitable—better have twenty first-class cows than thirty second-class—such cows as those shown by Mr. Carrington or kept by the Messrs. Deuchfelds. Having got the good cows, then they must be well kept; they must be looked upon as machines—no stinting in any way or at any time. Except when dry for calving, I would never turn a cow out. I would house them summer and winter. I look upon summer shelter as quite as important as winter shelter. A cow cannot be kept too quiet. She is a nervous animal, and the most trifling causes influence her yield of milk. As to food, of course that must depend in some measure upon the purpose for which her milk is required. If for butter-making, we must bar anything that will interfere with the flavour of the butter; but still the choice of food is very wide, and, with the exception of turnips and mangels, there is not much to be avoided. I believe the prickly comfrey which is now being introduced will form a valuable addition to our cow diet, but whatever food be given it should be such as will keep the cow fit for the butcher in case of accident. To be able to keep cows in this manner arable land is required and such a system is out of the question on a farm nearly all grass. I cannot conceive any position more unsatisfactory than that of so many dairy farmers who have scarcely an acre of arable land. Daily brushing and grooming is a matter of course. With cows thus kept the objection as to quality of manure, and the drain upon the land is to a great extent met. Mr. Carrington very justly observes in his able paper on "Dairy Farming," R.A.S.E. Journal, 1865, p. 345: "This objection to dairying has, however, lost much of its importance since modern science has placed the mineral stores of the earth so largely within our reach." Mr. Carrington agrees with Mr. Harrison, of Frocester Court, near Gloucester, who contributed a most valuable paper several years ago, that the yield of milk per cow may be put down at about 550 gallons. I think both these gentlemen are below the mark very considerably. Mr. Jenkins, in his paper on "Farming in Schleswig and Holstein," R.A.S.E. Journal, 1876, p. 352, quotes the figures from a well-managed farm, on which books had been carefully kept for ten years, and there the yield of milk is given at 700 gallons per cow per annum. From the experience I have had with large Shorthorn cows, highly fed and housed, I put the yield at 900 for cows at their best, and, heifers excepted, the average of a well-managed herd at 800. That cows can be kept in perfect health without exercise I may mention two animals that came under my personal notice—the one a half-bred Alderney, which calved down five times in a London shed, and a Shorthorn which we calved down four times, and which was only sold because the whole of the herd was disposed of on account of the cattle plague having got very close to us during the recent outbreak. This cow had been in milk about four months, and was giving at the time she was sold about 20 quarts of milk a day. There is one important point I would mention here, and that is, the almost perfect security that may be obtained by a small amount of trouble, from a general outbreak of pleuro-pneumonia in a herd of cows. Some years ago our cows suffered from a severe attack, and we lost several. At that time I had placed our sheds at the

isposal of Professor Brown, who wished to take notes for a report to the Privy Council on the effects of inoculation. He drew my attention to the advantage of the use of the thermometer, and I at once established a system of observation, since the adoption of which we have been perfectly free from this dreaded complaint. Twice every week, on the same days and at the same hour, the temperature of every cow has been taken, and the result recorded in a properly-kept book, each cow being known by her number over her head. The temperature is taken in the vagina: a thermometer about 6 inches long and as thick as an ordinary lead pencil is used. The normal temperature of a cow is 101. Our practice is, if we find the temperature of any animal to be 102, to take the temperature again in six hours' time. Frequently the increase may have been caused by some very temporary derangement—say a cow may have over-eaten a little, and the temperature will be found to have returned to the normal figure. If, on the contrary, we have a slight increase, even to 102½, we watch carefully, give a dose of physic, and if we get an increasing temperature up to, say 104, we *never* hesitate a moment, but have the animal sold for slaughter. As our cows are always kept fat, the loss is nominal, and of course the animal is killed before any disease has developed itself. As it is well known that I am especially interested in the supply of milk to towns, I may be allowed to say something on this head. Ten, or at most twelve, years ago, comparatively little milk was sent from the country to London, and other large towns. The facilities afforded by the railway companies have created an entirely new business. Liverpool, I believe, led the way some twenty years ago. Now little less than 100,000 gallons per day are brought into London from the country, and there cannot be a doubt that the sale of milk is more profitable to the farmer than any other system of dairying. My paper is already sufficiently long, or it would not be difficult to prove that, given attention to business, good cows, liberal diet, and care as to the time the cows come in, £10 profit per cow may be made. As to the time cows should come in for sending milk to London, I will, with your permission, read you a few remarks I drew up some time ago:—

A FEW WORDS ON THE RELATIVE ADVANTAGES OF A SUMMER AND WINTER DAIRY.—Many farmers think that it is most profitable to calve their cows down in the spring, obtaining their milk while at grass in the summer, and keeping them *cheaply* (as they say) in the winter, when the milk falls off. I maintain that this practice is the most unprofitable and wasteful, and by far the most expensive. The system of keeping cows *cheaply*, as it is called, in the winter, when they are coming forward in calf, is most unwise. A cow ought to be kept in as good condition as possible all the year round. If she be so kept, and anything occurs to render it necessary to kill or sell her, she is worth money, but if forward in calf and *poor*, or is poor at calving, she is not worth anything. Where the object is *milk*, autumn calving is the most profitable, without a doubt. A cow calving down at the end of September, or beginning of October, will in the first place, be in good health and condition, having had a run at pasture, while dry. After calving, if she is housed, at least at night, and well fed, she milks well and keeps her milk until grass comes; then, when otherwise her milk would begin to sink, the fresh grass springs her milk again, and she will give a good supply, if anything of a milker, until the end of July, and go dry in August and September, out of the way, when all hands are wanted for harvest work. My experience is that cows so treated milk at least one-tenth longer than cows calv-

ing in spring—or rather, give an actual quantity, during the time they are in milk, of one-tenth more milk. Not only so, but they are in full milk during the six months when milk brings the highest price, and only for four when it sells for less money. On the spring-calving plan this is reversed: they are in full milk during the six cheap months, and during only four of the high-priced months. Moreover, a dairy, managed as I suggest, is worth from ½d. to 1d. per barn gallon more, all round, than a spring dairy. No animal pays for good food better than a milking cow. I speak from a long experience both in the country and in London. Our cows kept in our London sheds prove what I say. There, although food has to be bought, we keep them as well as it is possible to do, and we calve them down two, three, and four times round. Of all roots, our experience is that potatoes produce the best and most milk.

Also I will give you the heads of the agreement or contract which is entered into by the farmers who supply milk to the Company with which I am connected:—

I, the undersigned of do hereby Contract to supply Milk to the Aylesbury Dairy Company Limited, on the Terms and Conditions as hereinafter stated—that is to say:—I agree to supply from the day of 187 until the day of 187 at the price of pence per Barn Gallon (such Barn Gallon to consist of Seventeen Imperial Pints). The Milk to be delivered Twice daily at free of cost to the said Aylesbury Dairy Company, Limited.

All Milk sent by me to the Company during each week, ending on Saturday, shall be paid for by Cheque on the following Friday.

All Milk to be delivered Pure, of good quality, and in good condition.

No Milk to be sent from a newly calved cow.

No Milk to be sent from any Cow that is not in good health, or that is under Physic.

No Milk to be sent from a newly purchased Cow until she shall have been in the possession of the sender one clear day.

No Milk to be sent from any Cow whose Calf has been removed, for the space of one clear day after removal.

All Milk to be cooled in a Lawrence Refrigerator, to a temperature not exceeding 60 deg., before the churns are closed. The Aylesbury Dairy Company to have power to deduct from any money due by them to the sender the sum of Sixpence per Barn Gallon on every gallon of Milk not so cooled,—such deduction not to affect the liability of the sender under the last clause of this Agreement.

No Mixed Milk of two separate Meals to be sent:

All Milk to be sent away fresh—that is—the Morning's Milk to be sent off the same Morning; and the Evening's Milk the same Evening, Summer and Winter.

The quantity of Milk shall never be less than per day, and each Meal to be sent away fresh. The Aylesbury Dairy Company shall have power to deduct from the sender's account the sum of One Shilling per Barn Gallon on every gallon below the above-mentioned quantity.

That the sender shall cause all Dairy Utensils, Vessels, and Churns to be thoroughly inspected before being used and their perfect cleanliness insured: all water used, to be Boiled.

That the sender shall send no purchased Milk, that is, no Milk other than that produced on his own farm, unless by mutual agreement.

That in case any disease of a contagious character, such as

small-pox, typhoid or scarlet fever, occur in the family of the sender, or of any of his servants employed on or about the dairy, or in charge of any of the cows, then the person or persons so affected, and those persons living in the same house who have in any way personal communication with him, shall be prohibited from coming on the premises of the farm, or from taking part in the dairy operations, and he, the sender, shall immediately give information to the Aylesbury Dairy Company, in order that the Directors may use their own judgment as regards the use of the milk, they guarantee that the sender shall not sustain any loss from having given such information; but should any such disease exist, and the sender shall wilfully neglect to give information, then he, the sender, shall be liable to pay to the Company the sum of one hundred pounds, as and for liquidated damages.

That the sender shall be liable for all damages sustained by the Aylesbury Dairy Company, Limited, that may arise from disregard or neglect of all or any of the above conditions.

Dated this day of 187
Signed

Witness

Address

Accepted for the Aylesbury Dairy Company, Limited.

Witness

Now you will see what great importance we attach to cooling the milk. This is the *whole* secret of sending milk long distances, or of retaining it in good condition until it can, not only reach the town consumer, but until the town consumer consumes it. It is a question that simply admits of no argument; it is an imperative necessity, and any one who does not intend to abide by this rule and strictly carry it out, not generally, but meal by meal during the 365 days of the year, ought not to attempt to send milk. The animal heat and the cow's smell *must* be got rid of; it is not so much a moment of reducing the temperature as aerating the milk, exposing every particle of the milk to the action of the air, and it is for this reason that we insist upon the use of the Lawrence refrigerator, because from the construction of this machine we arrive at the double object of cooling the milk and aerating it at the same time. To show you the importance we attach to this we receive milk from two farms where the water supply is at times very small, and there we stipulate by special clause that if at any time the farmer has not water to supply to the machine, he shall nevertheless pass the milk over the machine, exactly as if he had sufficient water. We have had nearly 4,000 gallons of milk per day through our dairy at times during the last summer, the produce of some sixty farms, and whereas we have many farmers who never give us any trouble, there are others to whom it seems impossible to prove the necessity of this care. Of course our contract with such ones ended we do not renew.

Now, just a few words as to butter, and I will not detain you any longer. It is marvellous what an amount of good milk is annually wasted in England by attempting to turn it into butter, and yet by the most stupid carelessness utterly spoiling the article intended to be made. When it is known that with care, attention to the work in hand—real attention, I mean—and the use of the most improved utensils, butter of the best quality can be made with the greatest certainty, it is surprising to find persons continue to make an inferior article. If remark be made, they generally reply, "It's the land." I had a case only a few months ago, where a farmer occupying one of the very best dairy farms in England missed his market in selling his dairy of milk, and had to make butter. As there

is always a demand for first-class butter, and expecting that his would be good, we offered to buy it; and as the weak point in many dairies is the treatment of butter *after* it is churned, we offered to take it in the lump as the farmer in France sells it—we to make it up. We were to pay full market price, thereby saving to the farmer the commission he would have had to pay to the salesman, and the trouble of making it up. The first lot he sent was very inferior. We thought that perhaps the churn, or other utensils, not having been used for some time, were not quite in good order, and that the next lot would be all right. But the second consignment was reported as bad as the first. I could not believe that bad butter could come from such a farm, and that there was some mistake. I gave instructions that the third lot should be opened in my presence. It came up strong and rank, and there was no alternative but to inform the farmer that such butter was useless. Still, wishing to get the butter, as I knew the farmer must produce cream of excellent quality and flavour, I wrote to say that probably his people had got out of practice, and asked him to send us the cream, and we would churn it, and return him the value of the butter just as if he had sent us the butter. If I had attempted to pick his pocket he could not have written a more uncivil or angry letter. He simply told us we did not know what good butter was, and we had no further dealings. Now, nothing commands a more certain sale than first-class butter. There is plenty of second-class. The difference in value is many pence per pound, and the difference between first-class and second-class is, in ninety cases out of a hundred, only a matter of good management and an attention to trifles. We are being driven pretty hard by the Americans and others in our cheese trade, but we are being utterly smashed by the foreigner in the matter of butter. English butter, even from our best districts, except from just a very few special farms, is fast becoming a thing to avoid. Not only are we now dependent for nearly all our best butter upon Normandy and Brittany, and for considerable supplies from the North of Europe and Italy, but America is coming into our market on an enormous scale. From New York alone, to say nothing of shipments from other American ports, we have received this year, down to September 1, over 15,500,000 lb., as against a little over 6,000,000 last year. In cheese we have received 85,000,000 lb. as against 80,000,000. I am convinced that I am well within the mark when I say that nine-tenths of the highest-priced butter sold in London comes from abroad—chiefly from Normandy. Not that all butter coming from France or made and used in France is good—a great deal of it is most vile stuff, only it is well manufactured. In the spring of this year, being in Paris, I set myself to work to find out by what process the French butter is always of such even and close appearance. For some days I did not make much way, but at last I got on the scent and found what I wanted; and in a cellar in a narrow street near the Central "Halle," or market, I saw the commonest quality of Auvergne butter, white and almost as hard as chalk, turned into the "finest Normandy"—in appearance smooth and of the most beautiful colour. Much of this sort of butter finds its way to England, and, although of really far inferior quality to our butter, beats it out of the market, simply on account of the way in which it is made. As I said before, the difference in value between first and second class butter is enormous—at least 20 per cent., and this is, in ninety-nine cases out of a hundred, entirely thrown away by the most culpable neglect and stupidity. To my mind butter factories are quite as much, if not more, needed than

cheese factories. The inferior quality of English butter arises, to a great extent, from our process of setting the milk, requiring too long to obtain the cream, and of allowing the cream, when obtained, to become too stale before churning. This must be altered if first-class butter, as now required, is to be made. Two churnings per week are, or used to be, the rule in the Aylesbury district. The deep-setting system at a low temperature, now in use in North Germany, is alluded to by Mr. Jenkins in his report on "Farming in Holstein," *R. A. S. Journal*, 1876, p. 347) and by Mr. Sheldon in his report on the International Dairy Show at Hamburgh. Mr. Jenkins, in the number of the *R. A. S. Journal* just issued, more fully describes this process, the invention of a Swedish farmer, Mr. Swartz, stating that the system "is now extensively practised throughout the North of Europe, and that it has been the direct cause of the great improvement in the quality of the butter in Sweden, Denmark, and North Germany." Mr. Jenkins also tells us that we can obtain the necessary fittings for dairying on Mr. Swartz's system from Mr. Ahlborn, of Hildesheim, so that it will now be our own fault if we do not avail ourselves of the advantage, which, it cannot be doubted, we should derive from its adoption. By this process cream may always be churned while sweet and fresh, and it is here that I think farmers might combine and obtain so desirable a result. For some months I have introduced the daily churning of fresh cream into our dairy, and I am satisfied that this is the only way to obtain fine-flavoured butter in hot weather. Again, I am sure that three-fourths of the butter is spoiled after it is churned, by bad management in making up—not getting the buttermilk thoroughly out of it, and not making it up close, so as to exclude the air. It is here that modern appliances come in to assist the farmer, if he will only avail himself of them. Meeting my friend, Mr. Coleman, at the Smithfield Show last year, soon after his return from America, I had the good fortune to be told by him of a clever butter-making machine with which he had been much pleased at the Philadelphia Exhibition. I immediately wrote for one, and have had it in use for the last nine months. Mr. Sheldon saw a similar machine at Hamburgh, and speaks most highly of it. I obtained ours from the makers, Messrs. P. Embree and Sons, of West Chester, Pennsylvania; the one Mr. Sheldon describes is made by Mr. Ahlborn, of Hildesheim. They are virtually the same machines, although differing very slightly in construction. It most effectually drives out the buttermilk, and is so simple that a child may work it. I am not at all sure that we are using the best sort of churn in England. I had a churn described to me the other day by a Swedish gentleman which I think must possess advantages over any we use here, and I hope to have one sent to me in a short time. We use Hathaway's barrel churn and Bradford's midfeather churn—the latter slightly for choice. I so thoroughly agree with the remarks by Mr. Carrington in his paper on Dairy Farming, in the *Journal* of the Dairy Farmers' Association, that, even at the risk of being thought tiresome, I must ask your permission to allow me to quote them. "Another class of dairies is devoted to the production of fresh milk-butter. The price of this article has greatly increased, in spite of the enormous import, which greatly exceeds in value the import of cheese. There is no branch of dairy farming which is capable of more development. In many butter dairies the yield might be doubled in the winter months, or in summer, when the pastures are scanty, by feeding the cows with cake or meal. I

know some farmers who use no extra feed for their cows—who have difficulty in churning butter in the winter months—when the cows are all old milked. The use of a daily feed of 3lb. of decorticated cottoncake and 3lb. of Indian meal, at a cost of less than 6d. per day, would generally be amply repaid in the increased yield of butter alone, to say nothing of the improved condition of the cows, the reduced consumption of other food, and the extra value of the manure. On two of my farms, where my Shorthorn cows in milk were having such extra feed, I measured all the milk set up for butter for one week in January last, in order to ascertain its value. The yield of butter was in one case at the rate of 17 ounces per ten quarts, and in the other per eleven quarts of new milk. The price of butter at that time was 1s. 10d. to 2s. per pound. The return from the butter alone was therefore from 8d. to 10d. per imperial gallon, and as the skim milk for pig-feeding or calves is worth from 2d. to 3d. per gallon, the gross return would be from 10d. to 1s. per imperial gallon—a result not often attained by the sale of milk wholesale." With regard to cheese, it would be utterly impossible to describe the process of manufacture of the endless varieties of cheese, even if I possessed the necessary knowledge, which I do not. When, however, we know that the value of cheese made in England ranges from £30 to £90 per ton, we know that there is room for improvement in some dairies. Just one word on eggs and poultry, which are generally associated with dairy farming. From a statement in *L'Industrie Laitière*, a journal devoted to dairy matters, I find that France keeps about 45,000,000 hens producing 3,000,000,000 eggs. It is estimated that the annual meat value killed is 153,000,000 francs, equal to £6,120,000, and the value of the eggs at 183,000,000 francs, equal to £7,320,000. We are receiving over 80,000,000 eggs annually from France. It is an accepted fact in France that the ovary of the hen is not renewed—that is, that the hen can lay so many eggs during her life and no more. A longer or shorter period may elapse before the hen will lay these eggs, according to the treatment she receives. If she is badly fed and badly housed four or five years are required; if, on the other hand, she be highly fed and kept warm, her eggs will be developed more rapidly, in quicker succession. The hen, for egg-producing purposes, must be treated as a machine. Fine eggs, collected daily and sent to market while undoubtedly fresh, command a high price during autumn and winter; but how few can be obtained from the generality of English farms. At present, although we can give 1½d. to 2d. each for new-laid eggs, especially if of the brown varieties, and we require four to five thousand per week, we have the greatest difficulty in obtaining a supply; in fact, we cannot get enough. In France, where one scarcely ever dines without the everlasting "poulet," poultry-feeding is a great business, and magnificent poultry they get. The secret of the excellence of the fine fowls one sees in the Paris market is that they are fed from the day they are hatched, not allowed to "get a living," as is most frequently the case on English farms. The consequence is at three or four months old a good chicken is ready for the table; at six or seven, a fine heavy fowl, at the "fat" cattle show in Paris, held in February. Butter, cheese, vegetables, fruit, rabbits, pigeons, and poultry are also shown—the last three classes alive and dead. I think the addition of dead classes in our poultry shows, certainly those held in the winter, is much to be desired. In conclusion, we have the finest land in the world, the best farming generally, the most valuable cattle, and the best market; all we require is the

common sense to avail ourselves of these important advantages.

DISCUSSION.

The CHAIRMAN: As we want to turn this paper to a practical result, I hope we shall be favoured with a discussion of the subjects touched upon by those who understand it, of whom there are many present. And of the important points brought under notice there is one deserving of special attention—that in reference to shutting up animals and not allowing them to run about in the fields (Hear, hear).

Mr. J. K. FOWLER (Aylesbury) said they would all, he was sure, thank Mr. Allender very cordially indeed for the very able and interesting paper he had just read (Cheers). The paper was eminently practical. It was not as a practical dairy farmer he (Mr. Fowler) rose to address them, but as a resident in a great dairy district. Remembering the experience of the judges at the Dairy Show at Oxford, he should say that one point mentioned towards the close of the paper was of very great consequence to them, namely, the difference in the produce of cream and milk from different churns (Hear, hear). Looking at their reports, he found that there was a difference of quite 20 or 25 per cent. in the quantity of butter made by some churns from the same quantity of milk and cream, produced from the same farm. Upon the occasion of the Oxford Show, the judges—of whom he was one, Mr. Jackson, who was since dead, and who had given them a most able paper, and Mr. Gilbert Murray being the others—witnessed the experiments carried out most carefully under the able direction of Mr. Jenkins and the other officials, so that there could be no mistake, and they found the result he had just mentioned. Mr. Hathaway's churn, from a given quantity, produced 15 lb. 3 oz. of butter; from the same quantity another churn produced 12 lb., and another yielded 13 lb. This was a very important point to be considered. He agreed in what had been said in the paper as to the absence of care and attention to develop the great resources of the dairy in that dairy country. But he thought it was a very difficult thing to say which was the best system to pursue as a matter of profit. When his father dairied considerably at his farm at Broughton, the butter was sold at the London market from 9d. and 10d. to 1s. a dozen, and when it got up to a shilling per pound it was thought an enormous price; but at that time he was convinced the cow ate the whole produce of the summer in the shape of hay in the winter—that the cow consumed as much hay in winter as if sold in the ordinary way in the market would have made the butter scarcely pay (Hear, hear). He believed the system of feeding adopted in this country was most wasteful, and a great deal might be done in keeping the cattle shut up. When coming from Vienna he came through the Tyrol, and he was struck by the absence of cattle from all the districts through which he passed (Hear, hear). At one place he went out of his route, and he found that the cattle there were shut up all through June, and attended by women. He found a large house with sixty cows in one shed, all of whom being fed with grass cut and brought to them fresh two, three, and even four times a day. He did not think people here would like to live in the way these dairy girls lived, for they slept in a sort of bed over the cow's head, and which could be pulled up by means of pulleys (Laughter). The inference he drew from what he saw there was that the people knew what they were about, and what was the best system for feeding their cattle (Hear, hear). In this country there were large enclosures, and cows were not brought in and shut

up in sheds as they were abroad. The next question that arose was, What was the most profitable system of disposing of the milk? There was the American Condensed Milk Factory in the neighbourhood of a town, giving 18d. for the barn gallon in the winter, and 18d. in the summer, which would average about 9d. per gallon, because they required 17 pints—that was an extra pint in the barn gallon for what might be considered waste or loss in transit. Now as a farmer, he considered that was not money enough (Hear, hear.) Of course, if they could get milk at that rate they had no right to give any more, but when he found that consumers in London paid 5d. per quart, which was 20d. a gallon, as against 9d. or 10d., he could quite understand that there was an indisposition upon the part of farmers to sell their milk to those who offered only the smaller figure. (Hear, hear.) Now, with respect to the price of butter and the manufacture of butter. Mr. Allender had in this matter, hit the right nail on the head when he spoke of the wives and daughters and sisters of farmers standing from four o'clock in the morning till eight o'clock at night, scarcely ever leaving off, in a sloppy dairy, in which the work was never done, and they never saw the completion of their duties. If strict regularity and cleanliness were not strictly observed, it would be utterly impossible that good cream could be sent to London or good cream made at all. (Hear, hear.) He had heard formerly, and some years ago his own calculations led to the same result, that when a cow produced £12 10s. per annum, that was a fair and reasonable result. However, since the practice of sending milk to London had been in vogue, it was considered that £17 or £18 a cow should be made, and he heard of cases where as much as £20 and £21 per annum had been made.

A MEMBER: Does that calculation include the carriage of the milk?

Mr. FOWLER could not answer that question. Carriage, he was sure, would make an important item. This increased profit pointed to what might be done by still better feeding and management. The butter-making of the country he considered to be in a deplorably backward condition, and he spoke in the presence of some of the best dairymen in his neighbourhood. They knew perfectly well the difficulty in getting good dairymaids. They might get persons who understood their work perfectly, but they had got, as they said, hot hands, and could not make butter. He had seen a machine in use at Mr. Allender's place whereby all that difficulty was got rid of—a machine which seemed to have been imported from Sweden. The manner in which it accomplished the squeezing of the butter seemed to be very satisfactory. Such an appliance as this might be introduced not only with great advantage to the farmer, but with decided advantage to the consumers of butter, milk, and cream throughout the whole country. (Hear, hear.) They had to thank Mr. Allender for his very instructive paper, and he hoped it would be supplemented by some remarks from Mr. Jenkins, who had written so ably on the dairies of the northern counties. (Cheers.)

Mr. H. M. JENKINS (Secretary to the Royal Agricultural Society of England) said he had not had the advantage of hearing the whole of the paper, but he had had the advantage of seeing what Mr. Allender had done. At his very remarkable place at Rayawater Mr. Allender had shown an immense improvement upon dairy practice as it was usually carried out in England, and he should say he looked on Mr. Allender as a pioneer in England in introducing into this country some of

these refined and improved practices in dairy management which for the last few years had placed the dairy farming of the Continent so very much above our own. (Hear, hear.) There were several points that one could see at the Aylesbury Dairy Company premises, which showed at once that Mr. Allender stood alone, so far as he knew, in England in appreciating several of the most practical improvements that had been introduced into the dairy farming of other countries, but which by some extraordinary circumstance seemed to have altogether escaped the attention of English dairy farmers. (Hear, hear.) As a rule, Englishmen are very apt indeed to catch at any improvement, especially in mechanical matters, which shall reduce their expenses in the matter of labour, and tend to give them a better product, but he had never been able to understand why it was that the improved dairy appliances which had been described by himself as well as by others in English periodicals for the last five or six years, had been systematically ignored by English dairy farmers. He did not know till recently that there was one of these circular butter-making machines in this country. They were common enough in Sweden, Norway, Denmark, and even Finland, and out-of-the-way countries where one would not expect to find anything new or improved. Mr. Allender possessed one of these automatic butter-making machines, and he thought there was a great man in Finland who possessed a modification of it adapted to a small farm. In the countries he had just spoken of they had them for both large and small farms, and the cost was very trifling indeed when compared with the work the machine would do. That was not the only improvement to which reference had been made. In the north of Europe, where ice, or snow, or cold water, could be produced, advantage was taken of the discovery made some time ago by Mr. Schwartz, of Sweden, to plunge the milk in deep cans into intensely cold water, or into a mixture of ice and water. The effect of this was to make the cream rise with great rapidity, and after twelve hours' setting the milk could be skimmed. The butter made from the cream churned sweet had the peculiarity that it contained practically no curd; there was no opportunity for the cream to get sour, and no deposition of curd. Consequently, when the butter was made it would keep without any undue admixture of salt, and a slight admixture of salt was found sufficient to keep such butter sweet for a very long time, and therefore butter made in that way could be packed in casks, and exported, and sold as fresh butter after a very considerable interval, thus naturally commanding a very high price. In out-of-the-way countries, like Finland and Sweden, farmers far away from a railway were able to command from 15d. upwards per pound for their butter, and the nearer they were to railways of course the more they would get; in some instances, indeed, they got 18d. per lb. in consequence of their utilization of this discovery, which enabled them to churn their cream perfectly sweet. Mr. Allender has stated a good many points, but this will be one of the most novel to English dairy farmers, although to continental farmers it had been a household word for a considerable number of years. In these countries no doubt there was not very much snow or ice, but the recent experiment made in connection with the importation of dead meat from America showed that it was not an expensive matter to manufacture ice, and if ice could be manufactured profitably for the preservation of meat, he did not see why it should not be manufactured profitably for the production of butter. At any rate, it seemed to him that Mr. Allender's paper was particu-

larly opportune. The foreigners, especially the inhabitants of Northern Europe, were running the English dairy farmers very hard in the commodity which used to be considered their own specialty. Now, foreigners manage to produce butter which cuts ours out of the market, notwithstanding the long transit it has to bear. What they had recently heard from the Dairy Farmers' Association, and what Mr. Allender had pointed out, showed that they had still a large amount of work to do. It would be necessary to put to the test of our climate the appliances which in the cooler climates had not only been put to the test, but found in practice to succeed upon large scales. He hoped Mr. Allender's paper would be productive of benefit in the shape of practical results. (Cheers.)

The CHAIRMAN: I am told the condensation, or rather the compression of milk which arises by its being put in ice causes the globules to rise more rapidly.

Mr. JENKINS remarked that the action of heat and cold on animal products is very peculiar. The same results could be obtained by raising the temperature of milk or by reducing it, so far as regards the cream rising. In fact if cream was made to rise rapidly by raising the temperature of milk, at the same time a certain amount of acidity was developed, and therefore butter made from cream risen by means of heat would not keep like butter that was made from cream that rose in consequence of extreme cold.

Mr. H. NEILD (The Grange, Worsley, Manchester) observed that the paper raised such a variety of questions that it was rather difficult to deal with them all *seriatim*. It appeared to him they should begin by considering the class of cows fitted for the dairy and the kind of feeding to give her. As to the proposition that cows should be shut up, he might say that he found great advantage from turning them out in the summer-time at night and harbouring them in the daytime. He heard with pleasure the controversy now going on as to dairy cows, and he hoped that animals of this class would receive more attention at dairy shows for the future. At present judges did not seem to be guided by any uniform principle in discriminating which was a dairy cow and which was not. A good deal had been said at times in favour of cross-bred Shorthorns, but now the great competition seemed to be between Ayrshires and Shorthorns, and the butter from Alderney cows was discredited on account of its colour. There was so little uniformity in the matter of judging that really at the present time dairy farmers did not know what to do for the best. The question of churning was complicated, as in Lancashire by considerations of whether there were good markets for skim milk and buttermilk. He heard with astonishment what had been said about sloppy and dirty dairies, and if the gentleman who made these remarks would do him the honour of coming to the Grange at any hour of the day he would show him a dairy free from slops and free from everything that might offend the most fastidious. (Cheers.) On behalf of the dairy farmers of this country, and especially upon the part of those in his own locality, he protested against this denunciation. (Cheers.) He was astonished to hear what could be done by machinery in the dairy, and he thought, in view of these circumstances, we should consider whether it was not time to bring some of these machines into home use. (Hear, hear.) It was humiliating to find English farmers behind any others in the manufacture of any of their products, but he was sceptical on the point, and if the English farmer was behind he would show his power not long to remain so. (Cheers.) He was convinced nothing would be so beneficial to cattle as having

a liberal and good supply of malt, and that they could never have till the malt-tax was repealed. (Cheers and laughter).

Mr. C. S. READ, M.P. (Norfolk), said gentlemen present who happened to be dairy farmers had been asked to make a few observations. He was not a dairy farmer, but they would nevertheless allow him to say a word or two on this important subject, because he thought it was one that must be very well considered by the Farmers' Club, though that Farmers' Club was composed mainly of arable farmers. He thought the fact that they had a farmer in Norfolk who kept some eighty cows, and who was not very near a railway station, and had on his journey to a railway station to cross a ferry, and who sent all his milk 136 miles by rail to London, proved that the distance from which the supply of milk to the metropolis and other great towns was obtained was very much larger than people generally imagined. And he might say of this farmer, that although he lost some milk the first summer, since he has had a proper refrigerator he had never had one single gallon spoiled. Mr. Allender told them they should avoid two things in feeding cows—turnips and mangolds. That was what was grown chiefly in Norfolk, and therefore he feared if the doctrine was quite right that there they should never be very great dairy farmers.

Mr. ALLENDER: I spoke of butter.

Mr. READ said they had the opinion in Norfolk if butter did not taste a little it was no great thing, just as Londoners liked their eggs to have a little flavour. (Laughter). But, with a little care and attention, he believed they could produce butter from turnips and mangold that would really not taste at all disagreeable (hear, hear)—and as regards the milk he was quite sure nobody would know how it was produced. Mr. Allender had told them that it was a good thing to shut up dairy cows all the year round. It was quite possible that for the purposes of producing milk and flesh he might be right, but they had something else to consider, and that was the general health of the cattle throughout the country. (Hear, hear). He did not think that the progeny of those animals which were constantly tied up by the heads would in the course of some years be as healthy as our stock at the present time. (Hear, hear). One gentleman had stated that it would be quite right in summer time to shut them up in the daytime and turn them out at night, but that cattle should be shut up the whole year round without exercise would, he thought, in the end be detrimental to the health, perhaps not of the individual cattle, but almost certainly of their progeny. They had been told that £10 profit in the year was a fair remuneration for keeping a cow. Grazing was bad enough, but if grazers did not get more than £10 out of an old cow that robbed the land as the majority of cows did, he fancied they would stick to grazing, and not go into dairying.

A MEMBER: That means £10 clear profit.

Mr. READ: After all expenses?

A MEMBER: After paying for everything that is done.

Mr. READ should like to know with what profit and with what cost in the cases. Did this calculation cover all risk, outlay, and trouble? If so, then he begged leave to say that he thought the £10 ample and sufficient. Mr. Neild had said a good deal as to the different sorts of cows that are in competition for the dairy, and he has spoken of Shorthorns.

Mr. NEILD: Cross Shorthorns.

Mr. READ thought if he went into a showyard and saw the Shorthorn cattle he would be inclined to say they would not

suit the majority of dairy farmers. He believed there were some excellent dairy cows of the Shorthorn breed, but at the same time there could be no doubt that these agricultural shows were for fat cattle rather than for dairy cattle, and it would be a very good thing indeed if in all these agricultural shows there was a class for dairy stock as well as for the so-called breeding stock, which was in reality fat stock. There was a cow they had not heard of that night, and which he hoped had gone out of fashion, and that was the cow with the iron tail. (Laughter).

Mr. J. TREADWELL (Aylesbury) said, being a somewhat old-fashioned dairy farmer he wished to say a few words on that subject. He had generally gone on an old jug-trot system, and had not availed himself of any of those appliances which they had heard so much about that evening. He believed that one of the first requisites in dairy-farming was that the farmer should sleep with the dairy-maid. (Laughter). One gentleman had said that dairy work was very sloppy work; another said that it was very clean. His experience was that it could not be very clean, so to speak, work, because all the day long you had to contend with the mess about the pails—that is, if you made butter, from the time when the men brought in the milk in their dirty shors. In the first place, there was the milk dripping on the leads. There was not much waste in that, but still the milk slopped over. The leads had to be cleaned, they had to be rinsed with hot and cold water, and there was more slopping with that. In fact, he had yet to learn how a dairy could be kept dry. Of course you could keep it clean by means of washing, but you could not keep it dry and neat. The pails had to be cleaned as soon as the milk had set, and there was a great slop with the hot-water and the scrubbing; and then, when the churning came, and the cream had to be taken out of the cistern and put into the churn, there was a good deal of slopping. Of course there would not be much waste, but still there would be the cleaning of the utensils; and he repeated he had yet to learn how you can keep a dairy tidy and clean for many hours of the day. With regard to the production of milk, cream, and butter, much of which he had heard brought vividly before his mind something which occurred in a discussion that took place on that subject in the old place where they used to meet some years ago. His friend Mr. Leeds put a question to him, and was perfectly astonished when he told him what was the consumption of his dairy cows in winter. He afterwards said that his answer kept him awake he did not know how long (laughter). What he said was that one of his dairy cows ate in the course of the winter 2½ tons of hay. Mr. Leeds said that that quantity of hay went far beyond his usual practice, and in that respect he did not consider it wise to feed animals in that way; adding that if he (Mr. Treadwell) gave his cows a little hay, a little straw, a few roots, and a little cake, he would find that a less expensive mode of feeding. He turned the matter over in his mind and determined to try a little of that system, and he was happy to say that since then he had had no cow eating 2½ tons of hay in winter, or much above half that quantity. If that were the case he should not be able to keep many cows in a dry season. He used a small quantity of hay with straw and mangel, and he had yet to learn that mangel made rank butter. It might make butter pale, but he did not believe it made butter obnoxious to the taste. In addition to straw and mangel he had used all sorts of meal and cakes; he had used cotton-cake, palm-nut meal, oatmeal, and other meals, and he

had come to the conclusion that decorticated cake was the best kind of food that could be given to cows for making butter, and he gave them 2 or 3lb. a day. He had to thank his friend Mr. Leeds for having set him thinking about that matter. Some years ago he read a paper on Dairy Farming before the Aylesbury Agricultural Society, and he then raised the question whether it would be found profitable to give a dairy cow—theirs was a large dairy stock district, more so a few years ago, perhaps, than it was now—3 or 4lb. of cake all through the year. He thought it would, but in making the calculation what would be the cost and what would be the extra amount of produce, he found that you could keep a great many more cows if you gave them cake on the grass than if you gave them cake alone. Further, he thought the droppings of cows fed in that way would be much better than those of animals fed only on cake. In winter, when a cowshed prepared good manure, with a slight admixture of cake would be found very much better than manure without it. He remembered some years ago giving a yard of cows nothing but hay, and giving another yard of cows hay mixed with cake. He kept the manure from the two yards quite separate, manuring one part of a field with one kind, and another with the other, and he afterwards found a difference of 10 cwt. in a crop of hay. [A MEMBER: "On which side?"] In favour of the cake. He had seen the butter-making machine at Mr. Allender's place, and, though he thought they would have a difficulty in making their wives and daughters appreciate it, he had no doubt that in many cases the adoption of the system would be beneficial. It was the practice in his district to salt butter with salt brine; you must have a little flavour of salt, and he did not see how the brine was to be worked with machinery as well as with the hand. With regard to breeds of cattle for dairy purposes, he thought that the best cow was one of a Shorthorn character; for you must have some beef, otherwise the dairy would not pay.

Dr. VOELCKER, (Salisbury Square) said some very useful, practical remarks had fallen from the lips of Mr. Treadwell, and he wished to make a few additional ones on the points on which that gentleman had chiefly touched. He was very glad to hear him express such a favourable opinion of decorticated cotton-cakes. He remembered a time when nobody scarcely liked to purchase that cake even at £4 10s. per ton, and when it was, in fact, very little used at all. Knowing that it was peculiarly adapted for the production of rich milk, he brought it under the consideration of a number of dairymen, and he was now glad to hear testimony to the great value of decorticated cake for dairy purposes from so good an authority as Mr. Treadwell. Another thing which struck him very forcibly in that gentleman's address was, his statement that he had given up the practice of feeding his cows in winter with nothing but hay. That was, perhaps, the most expensive way in which anybody could keep dairy stock. (Hear, hear). Many years ago Mr. Ames, who had a large dairy farm near Petersfield, in Hampshire, told him that he could not afford to keep his cows on nothing but the natural produce of the land—his land was nearly all grass land—and that he gave them 2 lbs. of bean meal and 2 lbs. of oatmeal made into a porridge; that enabled him to keep a much larger amount of stock on a given quantity of land than he otherwise could do, and that he obtained a much larger quantity of milk and got a much larger profit in consequence of pursuing that system. That was a matter which was well worthy of consideration, because there were many dairy farmers who not only produced less milk than they might produce by feeding their cows more liberally, but

also impoverished their land by drawing off all the natural produce and restoring nothing to it. By feeding them with bean meal, which was rich in nitrogenous matter, and, still better, by giving them cotton-cake, you could produce a larger quantity of milk and keep them in better heart. Two lbs. of Indian corn and 2 lbs. of decorticated cake was the best food that could be given to a dairy cow, inasmuch as it would improve the flavour of the milk and make a fine-tasting milk. He wished to make a remark with respect to the production of butter. They had heard from their friend Mr. Jenkins that excellent butter was made in the northern countries by the method of Mr. Schwartz, who found that when milk was cooled down to 54 or 55 degs. the cream rose rapidly, and was uncontaminated with any of the curdling matter. He believed that anyone who paid the slightest attention to the production of good milk would agree with him that that was the most rational way of producing good butter. There was an absolute necessity for the northern dairy farmers to produce butter of the best quality. In the first place they had nothing but the natural produce—a most expensive raw material for the production of butter. There could be no question the butter which was the natural product of grass was superior to any butter which was made from meal. Further, as regarded the feeding of cows on roots and linseed cake, it should be recollected that a good deal of the cake which was made at Hull and other places had a good deal of stuff mixed with it, that its taste was not very fine, and that the bad taste got into the butter. It was, therefore, absolutely necessary that the produce which made the butter should be of the finest quality in order to make it keep well. It kept for the reason pointed out by Mr. Jenkins, namely, that there arose no curdling along with the cream, the curdling matter being that which turned so rapidly, and which was so soon subject to fermentation or putrefaction, which there was no means of stopping. Unless the milk were produced under the most favourable conditions it would be impossible to avoid the contamination of the cream with curdling matter. There was, perhaps, some design in letting curdling matter rise with the cream, because it was found that when cream contained a good deal of cheesy substance you could squeeze into the butter a large amount of water. The cream and the curdy matter formed together an emulsion which enabled the dairy farmer to get more water into the butter. Butter which was not of the finest quality contained a large amount of liquid. If people would pay a fair price for the best kinds of butter that evil would remedy itself, but unfortunately the conscience in England would not pay a price according to quality, and hence the dairy farmer found something like a justification in his own mind for selling an inferior article. So long as people would not pay a high price for butter of the best quality, there could not, he thought, be any very rapid improvement in the art of butter-making in this country. (Hear, hear.)

Mr. ALLENDER then replied. He said, notwithstanding what fell from Mr. Treadwell on that point, he considered it simply disgraceful for a dairy to be sloppy. If that gentleman had visited his place that day he would have found that although 250 cows had been there before ten in the morning, there was nothing at all sloppy. The butter-making machine at Bayswater cost about £20; but it was subject to a large freight from America, and it would be possible to get a very good one in this country at from £5 to £8. He was very glad to hear an old dairy farmer like Mr. Treadwell express his concurrence in the views of Mr. Carrington, and also to hear Dr. Voelcker

say what he did in regard to the use of cake and meal. There could be no doubt that hay was a most expensive food for dairy purposes. Dr. Voelcker was quite right in assuming that there was an immense quantity of water in the butter imported into this country. The other day a gentleman who visited him told him that he applied a French machine to a firkin of butter, for the purpose of testing it, and that out of the 60lb. of butter he expressed 6½lb. of water. That was equal to 1¼ per lb. They had been told that it was impossible to have butter without salt, but it was not necessary to have the water.

The CHAIRMAN observed that there was about 15 per cent. of water.

Mr. ALLENDER continued: As to what Mr. Read and Mr. Treadwell said in defence of mangels and swedes, he might remark that his remarks were very casual. He admitted that after March mangel was one of the best kinds of food that could be given to cows, containing as it did a large proportion of saccharine matter, and producing a large quantity of milk. He had not a word to say against mangel if backed with a large quantity of other food. Mr. Read objected to cows being kept constantly tied up. He (Mr. Allender) said that.

Mr. JAMES HOWARD moved a vote of thanks to Mr. Allender for his very able and instructive paper. He had listened to that paper with more than ordinary interest, because he had just changed his own system for the rearing of his stock for dairy purposes.

Mr. T. HORLEY, seconding the motion,

The CHAIRMAN said, before putting the motion he wished to observe that they had had a very interesting paper, opening up a very wide field for discussion with regard to the sanitary condition and the improvement of dairy stock. It should not be forgotten that many years ago there was an excellent series of articles on the subject in the *Journal* of the Royal Agricultural Society; and Mr. Hirsfall dwelt expressly on the undesirableness of feeding cows upon hay alone, on account of the excessive cost which it entailed.

The motion was then put and carried unanimously, and Mr. Allender returned thanks.

This terminated the proceedings.

PEMBROKE.

THE ROYAL SOCIETY AND THE BLACK BREED OF CATTLE.

At a meeting of this Club held at Pembroke, on November 10th, Mr. W. O. Hulm in the chair, Earl CAWDOR said:—

I am surprised that the Royal Agricultural Society does not give prizes for Welsh cattle, and that Welsh farmers are indebted to the liberality of the Corporation of Liverpool for the prizes that were offered there. I thought this was very odd, and I asked a friend in North Wales to get me a list of Welsh farmers that belonged to the Royal Society. They were a considerable number: I will not trust myself to go into the figures, but they were a great many. I also had a statement of the number of cattle that were exhibited, and I sent this statement to the Royal Agricultural Society, and requested that it should be laid before the Council, and that influence might be used to give prizes for our cattle. But the efforts of individuals are worth very little, and I would venture to suggest to this Club whether it would not be worth while to ask Mr. Powell, our Secretary, to communicate with the Secretaries of other Agricultural Societies in Wales, asking

them if they will unite with us in making a joint application to the Royal Agricultural Society if they will be kind enough when they hold their next meeting at Bristol, not to ignore us entirely. We should ask them if they would be good enough to give us a few prizes. The first thing to ascertain is whether this Club agreed with me in my view, and if so, whether they would agree to requesting the Secretary to communicate with the Clubs in other parts of Wales, asking the Royal Society, who are very well off, to give us prizes for Welsh cattle.

It was subsequently agreed that the Secretary should carry out Earl Cawdor's suggestion.

WENLOCK.

At the annual dinner held at Wenlock on Monday, November the 5th

Mr. J. E. SEVERNE, M.P., said:—There was no doubt that the past had been a very serious season for all of them—he said for all of them, for the landlord depended upon the tenant, and the two must rise or fall together, and one could not do without the other. He sincerely hoped, however, next year, when he had the honour to fill the post of President, which they had done him the honour to ask him to fill, he should be able to say that times had changed, and that a more prosperous series of seasons had dawned upon the agricultural interest. They had had of late much to contend with—bad weather and bad crops, and they had also their dreadful enemy the cattle plague again attacking them. He trusted that among the measures that would be carried during the coming session of Parliament there would be one to prevent the intrusion of that most dreadful enemy to every farmer. He believed it would be possible to stamp the disease out at home, if they were only sure that it would not be imported again from abroad. When the cattle plague broke out in London it was shown that it was possible to confine it to a certain district, and by wise regulations he believed they could prevent it coming into this country at all. He believed that if no live animals were introduced into the country there would be no difficulty in providing a supply of meat for every consumer. There had certainly been something done in favour of agriculture during the past session of Parliament. The Prisons Bill had been a concession to them, and he lived in hopes that it would ease their pockets, and also, by making the punishment in each prison similar, have a deterrent effect upon crime, for hitherto there had been great laxity in some of the prisons of the country, and he hoped that would hereafter be altered. It was true the Bill could make no great difference in this county, although it might in others, for in Shropshire, as he was happy to say, the county rate asked for at the last session was absolutely nothing, and it would be very difficult to make a reduction upon that. The affairs of the county had been so well managed originally by the father of his colleague, Sir Baldwyn Leighton, that with one exception he (Mr. Severne) believed this county had less to pay than any in the country, and was one of the two that was entirely out of debt. He hoped, whatever changes might be made in the fiscal administration of the country, that they might never have things worse managed than they had been hitherto in Shropshire, for they had already succeeded in reducing the county rate to a minimum.

Mr. A. H. BROWN, M.P., said that it was his lot to reside at a rather dirty town called Liverpool, where a great deal of

American meat had been imported, and having heard so much about it, it occurred to him to inquire whether it was likely to affect agriculturists, whether it was a trade likely soon to come to an end, or whether it was likely to compete seriously with English farmers. He set to work as well as he could, and he had got all the information he could, and he was afraid he should have to show them that there was an amount of energy displayed in the carrying on of the trade which would compete seriously with the English farmer in the production of beef. First of all he took the official reports, and he inquired what quantity of meat was imported during the first nine months of 1876 and during the first nine months of this year. He found that during the first period he had named there were imported into all the ports of this country 77,000 cwt. of meat; while during the same number of months in 1877 there were imported no less than 376,000 cwt., which showed the growth to be perfectly prodigious, and which almost staggered him. The value of the meat during the first period was £200,000, and during the second £1,031,000. That was the state of affairs as regarded all the ports, but, to a certain extent, they had been subject to importations of meat from the Continental ports for some time. The point which he wished more particularly to inquire into was as to the importation of American meat, and he found that almost all of it came into the port of Liverpool, and he made inquiries as to the imports of meat into that port during the same period of 1876 and 1877. Last year there were in that period 26,000 cwt. imported into Liverpool, and this year 311,000 cwt.; and the increase in the value was from £74,000 to £900,000, or over £800,000. He thought that the figures showed that there was a trade being developed which must hereafter seriously compete with the farmers, so far, at least, as beef was concerned; but as to mutton the same thing did not occur, for the importation of that was much less. Having given them the figures, he would give them an instance of the energy which was displayed in the carrying on of the trade. He did not believe the British farmer wanted pluck, and no doubt what he was going to tell them would interest them, and induce them to "put their shoulders to the wheel." The other day a vessel came into Liverpool laden with American beef. It arrived at one o'clock at night; by two o'clock the men in charge of the cargo were flying out of Liverpool by express train to London; by seven the cargo was sold and paid for; by nine the money had been sent to the office for transfer, and telegraphed to America, where, owing to the difference in the time, they actually received the money before the cargo was received in England. That matter, of course, bore upon the question of the importation of live meat from the Continent, but although these figures were enormous, he could not say that sufficient dead meat was yet imported to stop the importation of live meat from the Continent. It appeared to him, however, that the whole of the meat trade would eventually take that form, and if that were so there would be no importation of disease. Mr. Brown then expressed his approval of the Prisons Bill, although he was afraid of its centralising tendency; and he could not, he said, help saying "Don't" to those who would cull upon the towns for the repair of the turnpike roads in the country, for if they did so there would be a terrible row in the large boroughs. He did not believe they need go to the boroughs at all and ask them to contribute towards the county rate for the purpose named. In the towns they had heavy rates already, but they did not think so much of them. As the ratepayers had a voice in the expenditure of the money which

they had to pay, and in the county, they would have the voice when County Boards were established.

The CHAIRMAN then gave the toast of the evening—"Success to the Club." He expressed his regret that the report had not been more satisfactory, but hoped that better times were coming for farmers all the country over. He believed Clubs of that sort exercised great influence throughout the country, and remarked that it was most desirable when agricultural questions were discussed that there should be a free admixture both of the landlord and tenant element. He observed that the discussions that were going on were being conducted almost entirely by the tenant farmers, who seemed to have it all their own way. He did not wish to appear before them and speak from the landlords' point of view, but he should like, in the few remarks he had to make, to say what suggested itself to him, looking at agriculture from a broad standpoint of view. He could not help saying that farmers had suffered greatly from the fearfully bad weather, and from the general depression of trade in the country. He heard many farmers say that they would not be able to carry on, and of farms being thrown upon the hands of the landlords. It was held that the Agricultural Holdings Bill did not do what was required for the tenant farmers, but now that the Legislature did not seem inclined to take the matter up, he thought he could say that the landlords were taking it up and were turning their attention very much more to it, and those who wished to get and to keep good farmers upon their properties would make such concessions as would conduce to the interests of both. He could wish, however, that more thrift was exercised by farmers; he was not alluding to any one in that room, of course, but farmers generally were exceedingly hospitable, and while he did not wish to see their hospitality diminish, he thought it was at times carried to the other extreme. He believed farmers need not be afraid of the importation of foreign meat—it was not so formidable as it looked on paper—for the population of the country is increasing, and the people must be fed. It was the same with meat as with corn. Ten million quarters of wheat were grown at home, and thirteen millions were imported, which meant that our home production of bread did not suffice for half the population, but that they had to feed above 16,000,000 people with foreign wheat, and he believed they would be able to keep the rest as customers of their own, both as regards corn and meat.

The toast was very cordially drunk.

Mr. DAVIES said the farmers must have far greater freedom of action, and far greater security for the capital they put in the soil than they had at present, if they were to stand against the competition which had arisen. It was a question which affected not the tenant farmers alone but the entire agricultural interest. It must be patent that the more capital the tenant farmer could be encouraged to embark in the soil the better it would be for the landlord. A tenant farmer could not lay out a large capital on the soil without improving the land. He regretted, that they had lost sight of the discussonal part of that Club, and he hoped it would be revived.

Mr. RALPH BENSON proposed the Health of the Chairman, and in the course of his remarks expressed the belief that the permissive character of the Agricultural Holdings Act had saved the small farmers of the country.

Mr. T. H. THURSFIELD said it had always been the aim of that Club to encourage farm labourers by offering prizes for hedging and ploughing, and to shepherds, and he was pleased to be able to say that there had always been good competition.

for them. They also gave prizes for cottagers' gardens, and he could recollect the time when the competition for them was very keen, but now they could hardly get up a competition at all. He did not know whether that was to be attributed to the migratory character of the farm labourer at present, or to the want of proper cottage accommodation, but he hoped those who had labourers and who got them to remain with them would endeavour to get them to compete for the prizes offered by the Club. In all agricultural gatherings the labour question would arise, and he thought the more it was discussed the better it would be for all of them. Of late years, as they all well knew, the farm labourer had received far higher wages than ever before, and no one present would disagree with him when he said that it was right that he should do so. They did not now hear the cry that farmers did not pay their labourers high enough, but on the other hand they heard farmers saying, "I do not mind the wages, but I cannot get the same quantity or the same quality of work out of the men that I used to do." How were they to meet that difficulty? He believed they could meet it if they would really set their minds to it, and he was prepared to bring forward the subject before the members of that Club for discussion. He could not help thinking that they had a large amount of labour latent in the farm labourer which only wanted bringing out and utilizing. Look at the farm labourer when at home, and see how hard he works for himself. Did he work in the same way for a master? Certainly not; and why? Because he has not the same interest in his master's farm that he has in his own garden. Could they not, however, "bring him out," and induce him to exert the same amount of energy for his master that he did for himself? He believed so. Let them give the labourer the same motive to work hard for his master as he had in working hard for himself, and that could be done by payment by results. Some might say, "That is all very well, but men won't work as long as they can keep themselves out of the workhouse." He knew there were too many of that sort, but he believed as education progressed they would get rid of that class. The educated labourer was the best labourer beyond all doubt, and he (Mr. Thursfield) found they were the men who stayed with him the longest. He was aware it was difficult to pay farm labourers by piece-work, but he believed all the difficulties could be overcome, and he thought it could be discussed with advantage by that Club. Mr. Thursfield said he agreed with what Mr. Benson had said as to the Agricultural Holdings Act.

MAIDSTONE.—The first meeting of the Club for the winter session took place on November 15, Mr. A. Chittenden presiding, when a valuable paper was read by Mr. J. K. Fowler, of Aylesbury, on "Foreign Agricultural Exhibition and the Dead Meat Supply of England." Mr. Fowler, who was one of the judges at the International Exhibition at Schleswig-Holstein, gave an interesting narrative of his journey there and the state of agriculture in the countries he passed through. Dealing with the subject of meat supply, he advocated the closing of the English ports to live stock and the extension of the dead meat trade, and pointed out that there were large tracts of land on the continent of Europe where stock could be reared and sent to this country for a total cost of about 6d. a pound. The English breeder, he remarked, would have nothing to fear by this, as home-grown animals yielded more meat than foreign ones, while the quality was superior. A discussion followed.

THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

We extract the following particulars from a statement of the receipts and admissions at the country meetings of the Royal Agricultural Society from 1852 to 1877 inclusive, published in the current number of the *Journal of the Society* :—

1852.—Lewes.—The returns are not complete, but 1,286 persons visited the Show on the first day, and the total receipts were £1,184 10s. 4d.

1853.—Gloucester.—Number of admissions, 36,245; amount received, £2,734 0s. 11d.

1854.—Lincoln.—37,635; £3,370 19s. 5d.

1855.—Carlisle.—(No return of admission) £3,261 19s. 6d.

1856.—Chelmsford.—32,982; £2,988 8s. 5d.

1857.—Salisbury.—37,342; £3,447 15s. 9d.

1858.—Chester.—62,539; £6,190 4s.

1859.—Warwick.—55,577; £5,461 17s. 11d.

1860.—Canterbury.—42,304; £2,739 7s. 10d.

1861.—Leeds.—145,738; £9,889 16s. 2d.

1862.—Battersea.—124,328; £9,539 4s. 4d.

1863.—Worcester.—75,807; £5,485 10s. 9d.

1864.—Newcastle.—114,683; £8,045 12s. 7d.

1865.—Plymouth.—88,036; £6,274 0s. 3d.

1866.—No Show in consequence of the prevalence of the cattle plague.

1867.—Bury St. Edmund's.—61,937; £4,254 9s. 6d.

1868.—Leicester.—97,138; £6,756 15s. 5d.

1869.—Manchester.—189,102; £17,059 5s. 10d.

1870.—Oxford.—72,053; £6,022 10s. 4d.

1871.—Wolverhampton.—107,519; £7,431 10s. 4d.

1872.—Cardiff.—85,185; £7,092 1s.

1873.—Hull.—104,722; £7,980 15s. 5d.

1874.—Bedford.—71,989; £5,580 17s.

1875.—Taunton.—47,768; £3,925 9s. 11d.

1876.—Birmingham.—163,413; £12,485 2s. 1d.

1877.—Liverpool.—138,354; £12,967 18s. 11d.

The "horse-ring" first appears a source of income in 1872, when it brought in, in addition to the amount named, £256 6s. 2d.; £585 3s. 10d. in 1873; £138 8s. 6d. in 1874; £88 9s. in 1875; £295 2s. 6d. in 1876; and £429 11s. in 1877.

It will be seen by these returns that the number of persons who visited the Show at Birmingham (163,413) has only been exceeded on one occasion, viz., at Manchester, in 1869, when the Prince and Princess of Wales were present, and when the number was 189,102. Leeds comes next with 145,738 admissions.—*Midland Counties Herald*.

THE ADULTERATION OF MILK.—At the Breasted Petty Sessions recently, Mr. F. H. N. Glossop in the chair, John Adams, farmer and milk contractor, Southall, was summoned for selling two samples of adulterated milk. The defendant's cart was stopped at the St. Marylebone Parochial Schools, and Mr. Gregg obtained a sample from two cans. In one instance the milk was certified by Dr. Redwood, analyst for the county, to contain 19 per cent. of added water, and in the other case 16 per cent. The Chairman said the case was a bad one, because the milk was intended for children, many of whom were weakly and scrofulous, and to whom a good milk diet was essential. Therefore this adulteration was very wicked, and the magistrates had decided to impose a fine of £20 and £2 costs.—Edwin Thomas Barnett and Henry Wood, also living at Southall, were each fined 40s. and 20s. costs, for respectively selling milk adulterated to the extent of 23 and 30 per cent.

CHAMBERS OF AGRICULTURE.

CENTRAL.

The first winter meeting of the Council took place on November 6, at the Salisbury Hotel, Earl Fortescue in the chair. The attendance was about an average.

After the usual preliminary business had been disposed of,

CAPTAIN CRAIGIE presented the following Report from the Room's Committee :—

"The Room's Committee of the Central Chamber of Agriculture have to report that without abandoning the projected scheme of bringing under one roof the various Agricultural Societies having offices in London, they have deemed it advisable to enter into negotiations with the view of securing in the meantime temporary quarters for the Chamber. The result of these negotiations they hope to be able to lay before the December meeting of the Council. Meantime they recommend that after this date the office of the Central Chamber of Agriculture be transferred to the present Library of the Chamber, at 21, Arundel-street, Strand, W.C., that all future Committee Meetings be held at that office, and that they be empowered to arrange to hold the Council and General Meetings in December next in the room now occupied in the Salisbury Hotel."

On the motion of CAPTAIN CRAIGIE, seconded by Mr. CLAY (the Treasurer), the report was received.

Mr. PELL, M.P., in presenting the Report of the Local Taxation Committee, called attention to the most important parts of it. In the opening, he observed, it was stated that "the chief events of the past session of Parliament affecting Local Taxation were the passing of the Prisons' Bill, the unanimous acceptance by the House of Commons of Mr. Clare Read's motion for establishing representative County Boards, and the carrying of a measure to secure uniformity in the very irregular dates of local accounts." It would be recollected, the hon. gentleman remarked, that the original proposal of the measure thus referred to, emanated from the Local Taxation Committee, and he himself had the honour of conducting the Bill up to its final stage. The report went on to say: "In the Prisons' Act of 1877 the Committee recognise a further and most important consequence of Sir Massey Lopes' successful motion of 1872. That decision of Parliament is loyally followed by the Government measure, which charges national duties on national funds, and relieves ratepayers from a heavy and exceptional tax. The passing of such a statute must therefore mark the past session. Should regret, nevertheless, be expressed that more has not been achieved, it must be remembered that no review of this year's Parliamentary work would be complete without adverting to the pre-occupation of the Legislature with foreign politics, and to the development by a small number of members of the House of Commons of a policy of factious obstruction. Not only have those whose grievances demand legislative remedies ground for complaint at the delay of ordinary business by obstructions of this sort, but discredit is thrown on a legitimate form of opposition to which it is necessary occasionally to resort." Mention was then made of 63 Bills

which had been introduced into Parliament in the last session adding to the special charges on ratepayers. Of these 46 had, it was observed, been defeated, and 13 amended in their more objectionable features, and in only three instances had resistance proved unavailing. The Committee said they looked forward with some anxiety to the legislation with regard to the highways and turnpikes, and they hoped the time was approaching when that question would be dealt with. With regard to the establishment of County Boards, they said ;—

"The debate and decision of the House of Commons on the 9th of March last on the question of County Boards marks a very important advance in the efforts made to improve and consolidate local administration. The Local Taxation Committee have never failed to maintain the intimate connection between financial and administrative reforms. If it has been their duty occasionally to insist that alterations in the machinery of Local Government formed no substitute for a direct relief of local burdens, they have also pointed out how largely the claim to financial redress is strengthened by a demand for an improvement in the administration of local funds. Now that some real progress has been made in aiding local ratepayers by means of general taxation, they believe the moment peculiarly appropriate for attempting an administrative reconstruction which may not only provide immediate advantage, but pave the way for a larger measure of relief than is yet possible. Their supporters will, therefore, have hailed with satisfaction the reception accorded to the resolution proposed by Mr. Clare Read, and which, being unanimously adopted, has placed on the journals of Parliament an unchallenged admission :—

"That no readjustment of local administration can be satisfactory or complete which does not refer county business, other than the administration of justice and the maintenance of order, to a Representative County Board."

They trust that the assurances so fully given by her Majesty's Government, that they mean to propose a representative provincial authority—constituted more or less on the lines so ably put forward by Mr. Read, and so cordially received by the House—will be redeemed in the next session of Parliament. Attention was then drawn to "a very valuable advance in the time of publication of the annual abstract of Local Taxation returns," which had "distinguished the last session," and it was observed that although several defects before alluded to as regarded data were still apparent, it was to be hoped that these would be removed in future under the new powers of the Acts passed this year. "In consequence of this welcome acceleration of returns (said the Committee), the President of the Local Government Board was at last enabled to bring his annual statement of Local Finance into much closer conjunction than before with the Imperial Budget of the Chancellor of the Exchequer. The Committee have seen with lively satisfaction the increased interest which has been provoked by these yearly statements. Although technically and chiefly connected with the growth and dimension of local debt, Mr. Selater-Booth's Budget gave interesting information as to the development of local charges, pointing out the increase of urban, school-board, and, in certain districts, of highway rates as well as the decrease of so-called poor rate, brought about

by larger treasury subventions and a better administration of the poor law. In tracing the growth of rateable property, the effect so far of the rating act of 1874 was referred to as adding to the assessed rental of the country £1,215,000, of which mines furnished £598,000, sporting rights £442,000, and woodlands £265,000. The attention which ought to be paid to the annual growth of local taxes, and the impossibility of rightly appreciating the financial position of the country by confining observation to purely imperial imposts, was conspicuously illustrated by the statement made on this occasion that every penny added to the rates represented a special tax of half a million on one description of property; while Mr. Selater-Booth, with good reason, contrasted the keen interest eagerly shown in Parliament regarding a possible addition of 1d. in the pound to the income tax with the too often reckless readiness with which a similar sum would be thrown on the local rates. The recent development of local debt has been a conspicuous feature in all local financial statistics. It had in 1875-76, as will be seen in the table appended to this report, exceeded £100,000,000, while for the current year it has been estimated at £105,000,000. It should of course be always borne in mind that a large portion of this outlay represents voluntary local investment, and that probably nine tenths of the whole amount is due by urban, metropolitan, or maritime authorities. Among the recent and most active borrowers on the security of the local rates are the numerous school boards now established throughout the country. Up to April last the sanction of the education department to loans by these bodies to the extent of £7,687,000 had been obtained, while demands are still to be expected. It will be remembered that the efforts of the Committee in 1870 were directed unsuccessfully to place some limit on the annual rates to be levied by school boards. Experience has now shown the justice of their fears. At that time the country was led to believe that under the Act of that year the expenditure could not exceed 8d. in the pound. The average school rate in English rural parishes already reaches very nearly 4d. in the pound. In 419 instances 6d. or upwards has been levied, while as much as 1s. or more per pound has been exacted in 68 separate cases."

The Committee also direct attention to "recent evidences of serious evil likely to arise from offering almost free education where perfect ability to pay is known to exist." (Hear, hear). In connection with that subject, Mr. PELL said he wished to add some information that he obtained only on the day before from the Education Department. Application had already been made for compulsory powers to be granted to the urban and rural school authorities, under the recent Elementary Education Act, to be vested in urban parishes in the municipal authorities, and in rural districts in the Board of Guardians, which would include over 2,000,000 children; in other words powers are being taken through the Act of 1876 for bringing under direct compulsion, without the expensive machinery of school boards, that vast number of children. It was very important that it should be known that there was an honest intention on the part of the country generally to make the best use it could of the new Act, while omitting to apply direct compulsion in all cases (Hear, hear).

The Report concluded as follows: "In concluding their Annual Report the Local Taxation Committee find, in the events of the session, encouragement to persevere in their efforts to improve and extend reliable information respecting local imposts, to excite deeper interest in local finance, to relieve the exceptional severity of the charges now borne by local ratepayers, and to resist all inconsiderate additions to

their burdens. At the same time they see no reason, if supported as before, to relax their endeavours to secure a still more thorough revision of Local Taxation, and a careful reform in the methods of Local Government. To enable them to continue their work, they have had in the past year again to appeal to the ready help of local Chambers of Agriculture. Their Secretary has attended and addressed several of these bodies in Northumberland, Durham, Lincolnshire, and Nottinghamshire during the year. Both from these and from many other quarters a hearty renewal of the confidence formerly expressed in their efforts has proceeded. A satisfactory response to their appeal for contributions has also come from their supporters throughout the country. Their best thanks are due to all who have thus sustained them, and especially to the sixty Members of Parliament whose favourable answers to their application for subscriptions are welcome alike in themselves and as indicating a renewal of that effective Parliamentary assistance on which they must always rely if they are to keep the question of Local Taxation Reform under the notice of the Legislature and the country."

Mr. PELL added that there was a larger sum in hand than there had been for some years, and that the subscriptions amounted to more than £600 a year, of which £300 came from Members of Parliament; while the expenses were lower than it had ever yet been, although he trusted the work was being done in an effective manner. He concluded by moving that the Report be received.

Mr. H. NEILD having seconded the motion,

Mr. J. HOWARD wished to say a few words in regard to what Mr. Pell himself had just said about education. The Report very properly called attention to the great expense incurred by Elementary Education; but the Council should bear in mind that the schools had been built with borrowed money, that the expense would not recur and the debt would diminish, and ultimately the burden thrown on the rates would cease.

The CHAIRMAN: After the lapse of 50 years (Hear, hear).

Mr. J. HOWARD said he had risen more particularly to take exception to what was implied in the remark of Mr. Pell that the machinery of School Boards was necessarily more expensive than that of the late Elementary Education Act (Hear, hear). That was not a fact. Much of the expense was the fault of the School Boards themselves. There was nothing in the Act to compel them to employ a solicitor as clerk. It was a serious evil in the last Act that Boards of Guardians had an additional duty imposed—the work thrown upon them was becoming intolerable. Again the new Act entailed a fresh expense in Attendance Officers. That was not the place to discuss the question whether School Boards were an evil or a good; much might be said on both sides, but he thought they should deal fairly with both systems.

Mr. H. BRIDELL did not agree with Mr. Howard about expense. Being the Chairman of a School Board, which represented five or six schools, he had done everything he could to keep down the expenses, and had even done all the work of a clerk himself, and he did not believe it was possible to keep the rate under 4d. or 5d. in the pound.

Mr. G. F. MUNTZ believed that a large part of the money spent by School Boards was thrown away. He had seen a school erected almost by the side of another, and he wanted to see some limit put to expenditure.

Mr. CALDECOTT said he knew an instance in which two schools were built in a village at a cost of £3,500, when one would have been sufficient.

Mr. DANIEL LONG maintained that the burden was not put on the right shoulders, adding that educational rates were, in the case of the agricultural community, practically an increase of the income tax.

Mr. JABEZ TURNER reminded the Chamber that the large expenditure incurred fell on the present generation.

Mr. GLENNIE observed that the borrowing of money by School Boards and other local authorities seemed to be increasing daily, and he thought the Local Taxation Committee acted wisely in calling attention to the matter.

Mr. WILLIAMS said the provisions of the Act that there should be school accommodation for all children within a distance of two miles from their homes, had so multiplied the number of schools that the number of children in attendance in many rural parishes was extremely small.

The CHAIRMAN said before the discussion closed he must express his dissent from Mr. Howard's assumption that the costliness of the work of School Boards are entirely their own fault (Hear, hear). In many cases the expense of electing the Board was much greater than the amount spent on actual education. In short there was a costly system of election and management over which the Boards had no control. Moreover there had been great extravagance in buying land and in erecting needlessly ornamental buildings. He could not look forward with Mr. Howard to any great diminution of expense under the School Board system. Education was no doubt a most valuable thing, but the goodness of the article supplied was not always in proportion to its cost (Hear, hear).

The motion was then agreed to.

On the motion of Mr. STRATTON, the best thanks of the Council were given to the Local Taxation Committee for their valuable Report.

The CHAIRMAN, after observing that he was himself the Chairman of the Committee, presented the following Report of the Cattle Diseases Committee:—

"Your Committee have great pleasure in congratulating the Council on the very able and satisfactory Report of the Select Committee of the House of Commons on Cattle Plague and Importation of Live Stock—a Committee not specially representing the agricultural interest, but comprising influential members of all political parties. After a most patient and laborious investigation, that Committee came to the conclusion that the measures which the Central and Associated Chambers of Agriculture have consistently advocated as necessary for the suppression of these diseases are such as it is desirable should be adopted in the interests of the community at large, and not by agriculturists only. Your Committee view with extreme regret the continued reiteration of the groundless imputation that our efforts to obtain security for our flocks and herds against imported disease arise from a desire to procure any reversal of the free trade policy long deliberately adopted by this country. We have throughout sought protection, not against competition but contagion from abroad. Your Committee would call attention to the fact that, during the restrictions this year on the importation of live stock from the greater part of Europe, the prices of meat have not risen, but, on the contrary, are appreciably lower—the natural result of the comparative freedom of our home stock from disease, and of a largely increased importation of dead meat. Your Committee trust that the Government will lose no time in taking the necessary steps to carry out the recommendations of the Select Committee in a matter of such pressing importance. And your Committee recommend the Council forthwith to

memorialise the Lord President to this effect, and to prepare a petition for presentation to Parliament at the beginning of next session, earnestly praying for the requisite legislation on the subject. Your Committee cannot conclude without expressing their deep obligation to those gentlemen whose valuable evidence effectually enforced before the Select Committee the views so long maintained by the Council on this question. —FOTESCUE, Chairman."

The noble Earl, in moving "That this report be seconded and adopted," said it was very gratifying to think by what a large majority a considerable portion of the clauses in the Report of the Select Committee of the House of Commons were agreed to, and that the matter was not made a mere party one; and it was also satisfactory to find that the views so long maintained by the Council of that Society were, in the main adopted by that Committee. Considering what a very small proportion of the animal food of this country which came either in the shape of live stock or of dead meat from abroad, compared in comparison with the amount produced at home, it was obvious that the interest of the consumer must very greatly depend on the securing against disease the live stock existing at home, and on the removal of that dread of disease which had done so much to discourage the breeding and feeding of live stock by British agriculturists. It was a very important fact that during the restrictions on the importation of foreign live stock, prices had to some extent fallen instead of rising.

Mr. ADKINS seconded the motion, and it was adopted.

The CHAIRMAN then moved "That the Cattle Diseases Committee be requested to draw up a memorial and forward the same to the Lord President accordingly; also to prepare a form of petition to Parliament, and forward copies thereof to the Associated Chambers, and invite their co-operation in urging Parliament to give legislative effect to the recommendations of the Select Committee."

Mr. CALDECOTT having seconded the motion,

Mr. ACKERS said he thought it very desirable that the whole agricultural body should join in the petition, and moved to insert after "Associated Chambers," "Farmer's Clubs and Agricultural Societies throughout the country."

Mr. STRATTON remarked that a deputation to the Lord President would meet with greater attention and have greater weight than a memorial alone.

Mr. H. NEILD observed that the last deputation did not meet with such a reception as would encourage them to send another.

Mr. J. HOWARD believed that a deputation would have more weight with the Lord President than a memorial, on account of the discussion that would probably take place, further the reports of what occurred would call public attention to the subject far more than the mere presentation of a memorial could do. As to the reception which the last deputation met with, it should be remembered that the Lord President was neither in possession of full nor reliable information, and that another deputation would be fortified by the Report of the House of Commons' Committee, and enable them to put more pressure on the Government than they ever could before.

After some remarks by Mr. H. Biddell, Mr. D. Long, Mr. Jabez Turner, Mr. Treadwell, and Mr. Masfen.

The CHAIRMAN expressed his concurrence in the opinion that all the Agricultural Societies should as far as possible be represented.

Mr. J. HOWARD then moved "That the President of the Chamber be requested to ask the Lord President of the Council to receive a deputation during the week of the Cattle Show."

Mr. MASEN seconded the motion.

The CHAIRMAN suggested that the matter should be left to the Cattle Diseases' Committee, and Mr. Howard and Mr. Masen assented and withdrew their proposal on the understanding that the Committee would endeavour to secure the co-operation of the Farmer's Club and the Royal Agricultural Society, and permission for a deputation to present a memorial to the Lord President.

The resolution of the Chairman was then agreed to in the following amended form:—"That the Cattle Diseases' Committee be requested to draw up a memorial, and ask permission to present the same to the Lord President by a deputation; also to prepare a form of petition to Parliament; and forward copies thereof to the Associated Chambers, Farmer's Clubs, and Agricultural Societies throughout the country, and invite their co-operation in urging Parliament to give legislative effect to the recommendations of the Select Committee."

On the motion of Mr. LAWRENCE, seconded by Mr. H. NEILD, a cordial vote of thanks was given to the Cattle Diseases Committee for the manner in which they had performed their duties.

The next business on the agenda being the consideration of the subject of Highway Legislation,

Mr. STARTIN moved the following resolution:—"That the continued abolition of Turnpike Trusts and the increasing burden of Highway rates render more imperative the introduction of a comprehensive Highway Bill; and this Council trust that, in any legislation on the subject, due regard will be had to the principles enunciated by the Council last year namely, that the classification of roads ought to be accompanied by a contribution from imperial taxation toward the maintenance of main roads; and, further, that it is desirable in every district to bring all Highway, Poor Law, and Sanitary administration under one authority, and to constitute in every county a representative Provincial Board." He said in attempting to arrive at a settlement of that question they might perhaps take a lesson from their friends on the other side of the Channel. In the able report which was presented by Mr. Goschen to the House of Commons a few years ago it was stated that in France the main roads were kept in repair entirely at the cost of the State, and the by-ways and cross-ways at the cost of the communes; and another important piece of information which was given was that the whole of the direct taxes of the different localities were paid, not into the imperial, but into a local Exchequer. That was the state of things in France. The other evening while dining with a German Professor of Chemistry from the State of Hesse, he asked him how the roads were repaired in Germany, and that gentleman told him that the main roads were kept in repair by the State, and the by-roads by the inhabitants of each locality, and at the license taxes were paid over, as they were in France, to a local Exchequer. During the last few months they had all heard a great deal about those unfortunate people the Bulgarians. (Laughter). Now what was Count Andrássy's proposal to remedy the ills of Bulgaria? Why, it was to allocate taxes levied in the locality to the locality. It was proposed that the imperial taxes should be paid to the Turkish Government, and that the other taxes should be expended for the benefit of the locality. He wished simply to indicate the lines on which he thought they ought to approach that question. He contended that the carriage tax, the gun tax, the dog tax, and other imposts of the same kind should be paid over into a local Exchequer, and, though well on in life he hoped to see the day when it would be proposed by the

Government that half the cost of the main roads should be borne by the country, and the other half by the localities. He entirely concurred with the opinion expressed by Lord George Cavendish some years ago that part of the cost of the main roads should be extended over a wider area than that of highway districts.

Mr. STRATTON in seconding the motion, said he fully agreed with Mr. Startin that part of the cost of highways should be paid out of the imperial Exchequer. It was not necessary that the management of the main roads should be taken out of the hands of the existing Highway Boards, but merely that a contribution should be paid to county authorities in proportion to the extent of the roads maintained in each highway district. There would be no need for an additional staff of officers; and it would be for the county authorities to define what roads within a highway district were to be reckoned highways, and main roads, and contribute to the county funds, such highways not being necessarily disurbanised roads, but roads which were maintained for the benefit of the country. He believed it was an unfounded apprehension that the establishment of County Boards would involve additional expense. There were already County Boards for the prisons and the bridges, and he believed that Boards, if backed by the rate-payers, would not cause any increase of expenditure.

Mr. CALDECOTT said he had had large experience in the management of parish roads; he had attended carefully to the administration of highway roads in the county of Leicester, and in five petty sessional divisions of South Warwickshire, and he had been chairman for 30 or 40 years of four turnpike trusts. He quite agreed with Mr. Startin in the general principle. All the expense of repairing arterial roads ought to be divided, and not fall entirely on their immediate locality; but when he came to the question, "What are arterial roads?" he found himself in great difficulty (Hear, hear). Of the four turnpike trusts of which he was Chairman, only one was a trust for a strictly arterial road, and he did not think it would be fair to put the burden of either of the other three on any district except that to which they belonged. As to highway districts, some were good and some bad, some were absurdly large and some ridiculously small. In the Henley petty sessional division in Warwickshire the cost per mile was £8 10s., while in the adjoining district of Kineton it was £33 per mile, and in Stratford, Alcester, and Shipton between £10 and £11. He must raise his protest against the abolition of turnpikes, which were, he contended, the most legitimate way of repairing roads.

Mr. MUNTZ said he concurred generally in the remarks already made on this subject, but there was one omission in the resolution which he hoped the mover and seconder would consent to supply. A vast deal of the money which was spent under the present system was spent uselessly, and he thought that fact should be used as a lever to urge the Government to try legislation. He would suggest the insertion in the resolution after the words "increasing burden of highway rates," "and the unsatisfactory condition of the roads in many districts."

Mr. D. LONG said in his district the roads were kept in excellent order at a cost of 10d. in the pound, which was as income tax of that amount. He did not think that an extension of area was in all cases practicable. Around the city of Gloucester, where there was an immense deal of traffic, the cost was what he had just named, 10d. per pound, while in the Cotswold Hills it was but 3d. or 4d. The inhabitants of the Cotswold Hills might consider themselves rather unfairly

treated by being included in the same area as the city of Gloucester. He thought that the arterial roads should be maintained by the general public because the general public used them.

Mr. JABEZ TURNER hoped the amendment moved or suggested by Mr. Muntz would not be pressed. They did not ask for legislation on account of the bad state of the highways, but on account of the bad administration and the bad system of rating.

Mr. J. HOWARD believed there was very little reason to hope for a contribution from the Consolidated Fund towards the maintenance of highways. A short time ago he heard a man of influence remark that there ought to be a Society formed to be called "The Consolidated Fund Protection Society" (laughter). He gathered from some recent remarks of Mr. Slater-Booth on that subject, that while he was desirous of forwarding legislation he could hold out no very strong hope of even dealing with the question in the next session. It appeared to him (Mr. J. Howard) that the first thing to be done was to get a new county authority, and that until that was secured they would really be wasting time in considering that question and others of a similar character.

Mr. ADKENS contended that there was needed a large extension of the areas of highway districts. In one village in Northamptonshire the cost of the roads was 1s. 10½d. per pound, while in an adjoining village it was only 5½d.

Mr. H. NEILD felt that the question was a very large one, and one that would not admit of longer delay on the part of the Legislature, which was bound to do equal justice to all parties concerned in the matter. In the parish in which he lived the cost of the roads had gradually crept up from 4d. or 5d. to 10d. in the pound; in consequence of the introduction of an immense commercial or railway element, which paid nothing, but seriously damaged the highway; and the ratepayers justly asked that that new kind of traffic be made to contribute. There were many districts in Lancashire where the cost of the road had been doubled or trebled through the operation of such causes.

Mr. C. S. READ, M.P., said he quite agreed with previous speakers that the first object should be to get a good county representative authority, without which it would be impossible to carry out a thorough reform of the system of local taxation. He was astonished to hear any one dissent from Mr. Muntz's statement that many of the main roads of the country by which, he supposed, was meant turnpike roads, were in a bad state. That was certainly the case in East Anglia, and he believed it was so in many other parts of the country. In travelling about in Bedfordshire the other day he observed that although many of the old roads were pretty good in the middle, they were very bad at the sides, and he thought that was generally the case. Many gentlemen had advocated a grant from the Consolidated Fund. He asked, Did they expect to get it, at least, in the way proposed? Did they expect that if the ratepayers of the county of Gloucester said to the Government, "We want £22,000 a year towards the maintenance of our roads," it would be granted?

Mr. STARTIN: We don't ask that.

Mr. READ continued: The Government would never allow any taxes to be allocated. He was a very old-fashioned man, and he considered that there was no system like tolls. Those who used the roads should pay for them, and therefore he was glad to see that in the last Highway Bill introduced by the Government power was reserved to the county authorities, in certain

cases, to collect tolls (No, no). He knew that that was a retrograde proposal, quite opposed to the general feelings of the public; but every one objected to paying (hear, hear) No doubt the old turnpike system was so rotten; but what had been done in South Wales since the Rebecca riots showed that tolls might work well under county authorities and with proper management. He did not believe there were many Welsh ratepayers who objected to tolls as they were now levied. He felt so strongly in favour of Mr. Muntz's suggestion that if it were proposed as an amendment he would be happy to second it.

Mr. STARTIN said he would be most happy to accept the words suggested by Mr. Muntz as part of the resolution.

The words "the unsatisfactory condition of the roads in many districts" were then inserted, with the consent of the meeting, after "burden of highway rates."

Mr. T. ASKELL feared that they would not be able to get any assistance from the Government unless it were in the shape of a poll tax (laughter).

Mr. T. HORLEY, jun., thought that until they had proper representative bodies elected in every county, legislation on that subject would do more harm than good. As regarded the cost of roads, it should be borne in mind that if the best roads cost more than others they rendered all the property around more valuable.

Mr. WILLIAMS maintained that no legislation could be satisfactory which did not make use of the roads the test of liability to maintain them. He would therefore propose, as an amendment, to omit the words in the resolution from "the principles" down to "main roads," and to insert instead, "the principle that as far as possible use of the roads shall be a test of the liability to repair them."

Mr. HICKS, in seconding the amendment, said he thought it very wrong to try and get rid of the burden of maintaining roads. It was a burden with which real property had been bought and had changed hands, and to endeavour to shift it to the shoulders of others was, in his opinion, a great mistake. People spoke of the Consolidated Fund as if you could put a bucket into it and draw out what you pleased, whereas the money came out of their own pockets. As regarded what were called local taxes, he would ask gentlemen seriously to consider what must happen when this country was engaged in a long war, if nearly all the imperial taxes of a direct character had been taken from under the command of the Chancellor of the Exchequer. It was not likely that the Government would for a moment listen to such a suggestion. He had, therefore, the greatest pleasure in seconding the amendment.

The amendment having been put and negatived,

Mr. JABEZ TURNER observed that the resolution was still somewhat different from the form in which it first appeared on the agenda paper.

The CHAIRMAN said the words "the unsatisfactory condition of the roads in many districts" had been inserted.

Mr. J. TURNER said he wished to move, as an amendment, that those words be omitted.

The CHAIRMAN thought it was now too late to do that, the meeting having assented to their insertion.

A rather warm discussion ensued on this question, resulting in Mr. TURNER's formally moving, with the consent of the Chairman and of Mr. MUNTZ, the original proposer, an amendment that the words objected to be left out.

The amendment having been seconded,

Mr. MUNTZ protested against gentlemen trying to burke the truth, in order to carry their point, as a great mistake.

The CHAIRMAN, in closing the discussion, said the question of highway legislation was one of the most difficult questions that could be dealt with by any Government. Many of them were old enough to remember the commencement of the present state of things in England. In France the great lines of communication were practically maintained at the national expense, the departemental roads were maintained at the expense of the departements, and the communal roads at the expense of the communes. That system might easily have been transferred to England whenever it seemed generally necessary to supersede turnpike roads, but for the introduction of railways, which had now taken the place of what were formerly the great lines of arterial communication. He quite agreed with Mr. Howard and Mr. Read that the first thing to be done in order to put any of the local administrations on a sound footing was to establish county representative Boards. As regarded the question before the meeting, he contended that what they wanted was the union, slightly modified, of the parish as the unit of highway administration with county administration. He maintained that there should be a county superintendence of roads, which might be secured with a very slight additional staff; and good vigorous superintendence meant economy (Hear, hear.) Mr. Howard truly remarked that the Poor-law Guardians were already overdone with work; but a great deal of work might be done on the old English system of doing work by means of persons elected by their fellow citizens, who confided in them. The nation had become alive to the necessity for a great many things being done in addition to what was considered requisite in former times; and he did not see any reason why there should not be some contribution on the part of the public towards the proper maintenance of what was so essential to the convenience of the public as good roads.

Mr. JAMES TURNER's amendment was then put and lost, the numbers being 13 for the omission, and 16 against it.

Mr. PELL, M.P., said he had an amendment to propose, bearing on the important question of imperial taxation. It was useless to ask for imperial assistance in a form in which it was not likely to be obtained, and, on the other hand, he thought that those who used roads at a considerable distance from their residences ought to contribute towards their maintenance. He proposed to omit the words after "due regard will be had" down to "imperial taxation," and to substitute for them the following: "The classification of highways and the adoption of an impartial system of tolls or local licences towards the maintenance of main roads." The main objection to the system of tolls, as had been clearly proved in Wales, was on account of the irregular and inconvenient positions in which the gates had been placed. It was very vexatious for a person who used only a few yards of road to be charged just the same as a person who used twenty miles. The rising in Wales was not against the tolls, but against their inequality, and he wanted to see in this country an impartial system of tolls, combined with assistance from imperial taxation.

Mr. ARKELL seconded the amendment.

Mr. ACKERS supported it, contending that a judicious system of tolls would be found one of the best modes of relieving the pockets of the ratepayers.

Mr. H. NEILD deprecated the Council's entering into details, and said that in his opinion the question just raised should be left to the County Boards.

Mr. READ, M.P., denied that the question was one merely of detail, adding that County Boards could not set up turnpikes of their own authority.

Mr. D. LONG believed that three-fourths of the farmers would object to see barriers essential to the collection of tolls set up again. Who would like to wait for three-quarters of an hour while an old woman was dressing? (laughter).

Mr. STARTIN, in replying, observed that the system of tolls as a system was now as dead as the Heptarchy. He agreed with Mr. Pell as regarded licences.

After some further discussion Mr. Pell's amendment was put and carried, the numbers being 15 for and 7 against.

The resolution was then, without opposition, adopted in the following amended form:—"That the continued abolition of turnpike trusts, the increasing burden of highway rates, and the unsatisfactory condition of the roads in many districts, renders more imperative the introduction of a comprehensive Highway Bill; and the Council trust that, in any legislation on the subject due regard will be had to the classification of highways, and the adoption of an impartial system of tolls or local licences towards the maintenance of main roads; and, further, that it is desirable in every district to bring all highway, poor-law, and sanitary administration under one authority, and to constitute in every county a representative Provincial Board."

The proceedings then terminated, with a vote of thanks to Earl Fortescue as the Chairman.

GLOUCESTERSHIRE.

THE SUPPLY OF MEAT FROM A NATIONAL POINT OF VIEW.

The following is a paper read by Mr. T. H. CHANCE, proprietor of *The Gloucester Journal*, before the Chamber on November 10th:—

It is only reasonable to anticipate that the Government will, in the next session of Parliament, attempt some legislation or take some action founded on the recommendations of the Select Committee which recently took evidence, and presented an elaborate report on "The causes of the recent outbreak of Cattle Plague, and the measures taken for its repression; and on the effect which the importation of live foreign animals has upon the introduction of disease into this country, and upon the supply and price of food." I propose briefly to review the Report and its recommendations, in justification of the following propositions:—That live stock should no longer be allowed to import disease into this country; that after having stopped the importation of disease from abroad, the Government should make more stringent regulations for eradicating and preventing the spread of disease in our own kingdom; that these measures are requisite not only for the security of producers but in the interest of consumers; and that the interest of the producer and consumer of meat are not really antagonistic, but identical.

The recommendations of the Select Committee having been already extensively published, I need only for the present purpose to remind you that they propose that the importation of all animals should be prohibited from Russia; and of cattle from Germany and Belgium, the Privy Council having power to prohibit the importation of animals from other countries if they think fit; an exception to be made in favour of store and dairy animals, provided they remain in quarantine 14 days and afterwards are placed under inspection for two

months. Provisions of great stringency are then suggested for the regulation of the home trade, and for defraying compensations for slaughter out of imperial, instead of local funds; and finally it is suggested that no further restrictions should be placed on the importation of foreign animals in respect to foot-and-mouth disease and pleuro-pneumonia, unless at the same time orders be enforced throughout Great Britain to prevent the removal of cattle in infected districts.

An examination of the proceedings of the Select Committee reveals the fact that some of the members of that body, representing large borough constituencies, came to the inquiry with prejudiced minds, imbued with the belief that the interests of commerce and agriculture of town and country are antagonistic on this great question of meat supply, and that they had to guard against a covert attempt on the part of the agricultural class to snatch some advantage at the expense of the populous meat-consuming constituencies. Enough evidence was given by competent men of honour and experience to dispel this ill-grounded suspicion, but it does not appear that the conversion of the sceptics was general or complete; for we find that some of the gentlemen who gave evidence were cross-examined much in the same style as though they were witnesses in a criminal trial, endeavouring to frustrate justice and obtain the acquittal of some notorious malefactor. Nor were the prejudices of the cross-examiners entirely dispelled by the weighty testimony given in favour of a course which would be fair and beneficial alike to producer and consumer; for after the evidence had been all taken, and the Committee were deliberating with closed doors upon the form of their Report, the official record of their transactions shows only too plainly that several borough members exerted themselves strenuously, though fortunately with success, to emasculate the recommendations, with a view to make them less effective in preventing the importation of the foreign cattle by which it was abundantly proved, disease had been communicated to and spread amongst our own flocks and herds. I notice this spirit of opposition in order to impress upon Chambers of Agriculture and kindred bodies, and especially upon publicists who may concur in our views, that even though the Government may agree to favour those views they will meet with persistent and able opponents in Parliament; and that therefore no occasion should be missed of impressing upon the country that the restrictions which home producers ask for are necessary for the restoration of a healthy and normal condition of the meat trade, and are the only sure means by which the price of meat can be universally and permanently reduced. The pernicious error that the agricultural interest seeks an exclusive benefit in this matter is so deeply-rooted and so widely spread that every opportunity should be taken to refute it. It might fairly be contended that if meat producers as a class have a grievance which is impoverishing their resources, crippling their business, and ruining their prospects, they have a perfect right to agitate for the removal of that grievance. And this argument might be maintained without invoking the obsolete bogey of "Protection" which still haunts the apprehensions of some who have had the good fortune to benefit by the imperfect development of a free trade policy. But it is an axiom of the science upon which a free trade policy is based, that there shall be no waste of the national resources, and that to benefit the consuming class at the expense of the producing class is false economy, obnoxious alike to the science of political economy and to the sentiment of justice. Agriculturists have obviously as great a claim to

abstract justice as cotton-spinners, or iron-masters, or day labourers—just as great a claim, and no greater. It is not only true that England is the greatest agricultural power in the world, but also that the agricultural interest is the greatest and richest of all interests in this great kingdom, the annual value of our agricultural produce being equal to 300 millions sterling. Such considerations may well entitle its suggestions to respect and careful consideration, and that is all that is required in the present case. We simply ask that evidence and arguments shall be fairly weighed in support of our presentment that what is best for the producer of meat is in the ultimate result best also for the consumer. A more simple issue was never submitted to the public intelligence; yet it is only after a struggle with unreasonable prejudice that a just verdict can be hoped for.

Many witnesses called before the Select Committee expressed positively their assurance that the farmers of this country are willing to submit to the inconvenience of such home regulations as may be found necessary to localise and stamp out disease when the danger arising from foreign importation had been removed. But in spite of these assurances from men whose opinions on other points were accepted without question, the Committee persists in putting the cart before the horse. Instead of making home restrictions contingent upon, and ancillary to the adoption of what in a non-political sense, I may call a "spirited foreign policy," the Committee advise that "the first matter to be really decided" is whether our home farmers will acquiesce in stringent home measures adding, "Should this be the case, then, and then only, would arise the further question as to whether new restrictions should be placed on the foreign import." It would be not only unjust but transparently absurd to attempt to stamp out disease at home while it was being uninterruptedly imported from abroad. Locking the stable door after the steed was stolen would be wisdom compared with such a policy; but happily the Committee have rendered it needless to argue against their strange inversions of ideas, because in their recommendations they place restrictions on foreign importations in the forefront of their scheme, and conciliate the malcontents by a mild suggestion that no further restrictions should be placed on foreign importations in respect to foot-and-mouth disease and pleuro-pneumonia, "unless at the same time" restrictive orders are enforced throughout Great Britain. When the Privy Council have taken the regulations out of the hands of local authorities it follows as a matter of course, that compensation for slaughter under those regulations should come from impartial instead of local funds; and it is recommended that while compensation for the slaughter of animals affected by cattle plague should remain as at present, compensation for the slaughter of animals merely suspected of that disease should be paid to the full value, but not exceeding £40 for any one animal.

The report of this committee is very important in one respect. It establishes once for all the fact that both cattle plague and pleuro-pneumonia are traceable to foreign origin. There is plenty of evidence to prove that if the supply of foreign disease can be stopped, it will be possible to stamp out disease at home. Professor Brown anticipated a general outbreak of foot-and-mouth disease throughout the country in the spring of this year, but he afterwards admitted to Mr. Booth that his prophecies had been fortunately falsified, because the cattle-plague restrictions prevented the expected outbreak. We only need a competent machinery of general application, and disease at home will no longer operate to

raise or keep up the price of meat. Having traced disease to foreign sources, and ascertained that it can be prevented from spreading when the foreign supply is cut off, no argument ought to be necessary to establish the proposition that live cattle should no longer be allowed to import disease into this country.

This brings us to regard the question from a national point of view. Without troubling to chop logic with the advocates of unrestricted importation, and without relying upon abstract principles of justice as between class and class, I say that to prohibit the importation of live cattle is as necessary for the consumer as for the producer. The foreign importers endeavoured to frighten the Select Committee into the belief that to establish such a prohibition would drive the foreign trade to other markets, and still further raise price of meat by reducing the supply. On the other hand, many practical witnesses assured the Committee, and convinced the majority of them, that a fixed rule of compulsory slaughter at the port would really increase the number and quality of the animals sent, because now the trade is uncertain, both as to supply and demand, so that buyers are not attracted, and the lack of competition makes prices irregular. A definite rule would impart steadiness to the trade, and cause it to increase, as is proved by the fact that during the recent restrictions large supplies were sent from abroad with the full knowledge that the animals would be slaughtered at the port. The advocates of continued importation from abroad revealed the weakness of this part of their case by their anxiety to place home restrictions before foreign prohibition. They thus sought to construct a golden bridge over which they might retreat from an untenable position. It was evident enough that if foreign importations were stopped disease would disappear; therefore it was sought to impose home restrictions first, so that the disappearance of the evil might be attributed to them, rather than to the foreign restrictions which were to follow.

But the refutation of the cry of "dear meat" is not confined to the belief that foreign importation would continue in spite of orders to slaughter at the ports. The carcasses of animals thus slaughtered can be conveyed inland in good condition by railway, as soon as the adoption of a regular system encourages the carrying companies to complete their arrangements. On this head the Committee note the fact that the Aberdeen supply of dead meat to the London market is largely on the increase, sometimes amounting to 70 tons per day, even in hot weather. It is, perhaps, more to the purpose to cite the opinions of eminent men like Mr. Clare Read, Mr. Booth, Mr. Jacob Wilson, and Mr. James Howard, who demonstrated clearly that if immunity from the two great scourges can be secured, the increase to be anticipated from our home breeding will, in course of time, be large enough to cover any deficiencies in the foreign supply. It would be easy to show that the price of meat in this country has been raised and kept up by the importation of the foreign stock which introduced the diseases by which our flocks and herds have been decimated. The value of all the stock destroyed by those diseases is probably greater than the value of all the imported stock, not to reckon the incalculable loss sustained by the wholesale sacrifice of breeding animals. The country has been impoverished to the extent of all that has been lost by disease, and death arising from disease, and is also poorer by the amount of money carried off by foreign importers, money which would otherwise remain to swell the total of our

national wealth. So far from this being merely an agricultural question, it is pre-eminently a national one. Foreign cattle imported the "Black Death;" the price of meat has been raised in consequence, and it is the consumer who suffers every time he buys from the butcher. As Mr. Booth told the Committee, the effect of a restrictive policy must be to lower the price of meat, because its production will be cheapened. The statement is so self-evident that it cannot be worth while to waste words upon it. Even if there were any reasons to dread a temporary rise in the price of meat while the change of system was being brought into operation, even if there were no proof that cattle for slaughter at the port would be forthcoming in an increased and more steady supply, the importation of dead meat might be relied upon to supply any temporary falling-off in the other direction. Continental importers complain that to prohibit the importation of live stock would derange their trade for a time, and reduce their profits. But we in this country, whether producers or consumers, must not be asked to perpetuate high prices on any such grounds as these. English legislation is low, and before the new system could be set in working order the Continental importers would have plenty of time to adjust their plans to the supply of dead meat instead of live animals. In fact, a perusal of Professor Gamgee's evidence leads one to the opinion that the change we ask for would ultimately be profitable to those very foreign importers who protest against the change on the inadequate ground that it would compel them to alter their arrangements. Professor Gamgee adheres to the opinion that more meat would be produced in this country in a couple of years than would be required even if the foreign import of dead meat were stopped and that during the interval the new trade in dead meat from America and elsewhere would quite make up for the stoppage of the foreign importation of live stock. "My belief is," he says, "that we should return to the free liberty of the subject in our home cattle trade, and to a healthy stock, feeding our people as we fed them in the past." And in answer to further questions he repeated the assurance that disease could be exterminated in this country, and would not revive, if all foreign cattle were excluded, adding that meat would not be one farthing per pound dearer if all foreign cattle were shut out to-morrow. The importation of dead meat is a fact which the home producer has to face under any circumstances. Last winter American meat of fine quality was sold in Gloucester in large quantities at twopence per pound below the charges of local butchers, and the same thing goes on nearly all over the country. This, however, is a matter of legitimate competition; it will tend to lower the price of meat to the consumer, and it furnishes an additional reason why the producer should not be unfairly handicapped in a competitive trade but should have immunity against the introduction of disease from abroad. To secure this immunity is the duty of the governing authorities, and all opposition to the necessary regulation should give way before the overwhelming evidence which exists to prove that the benefit of the reform will be mutually and equally shared by the producer and consumer of meat.

In the discussion which followed, the opinions expressed in the paper were unanimously endorsed, and on the motion of Mr. B. ST. JOHN ACKERS, seconded by Mr. T. NORRIS, a resolution was passed—"That the best thanks of this Chamber be tendered to Mr. Chance for his able and valuable paper on the Report of the Select Committee on Cattle Disease, to which this Chamber accords its unanimous approval; and that

he be asked to allow it to be printed and circulated, and that a copy be sent to the Lord President of the Privy Council." The following resolution was also passed:—"That the Government be respectfully urged to take immediate action upon the recommendations of the Select Committee on Cattle Disease and the Importation of Live Stock."

It was proposed by Mr. DANIEL LONG, of Whaddon, seconded by Mr. E. T. INSKIP, of Huscote, and agreed to:—"That this Chamber reiterates the following resolution which it passed on May 26th last—'That in the opinion of this Chamber the cost of repairs of dis-tarnpiked roads presses heavily on the ratepayers; and this Chamber is of opinion that all kinds of property should contribute towards the expenses of the main roads of the kingdom which are used by the general public.'"

NORFOLK.

THE LAW OF DISTRESS AS APPLICABLE TO AGRICULTURAL HOLDINGS.

The discussion on the above-named subject, adjourned from the previous meeting, took place on November 10th.

Mr. C. S. READ, M.P., said that this subject had not troubled the heads of the tenant farmers of Norfolk or of England generally. This led them to contrast the feelings of the tenant farmers of England with that of the tenant farmers of Scotland on this point. One reason might be that in Scotland it had been the custom to let farms by tender—"the highest bidder should be the hirer." That system had not happily prevailed in England to any great extent, certainly not in Norfolk, and he hoped it never would for the sake of both landlord, tenant, and labourer. No doubt there were certain farms not put up to tender, but which were advertised throughout the country, and although it was said that "no reasonable price will be refused," yet the man who bid a fair sum no doubt had been the higher. In Scotland there was another reason why so much was thought of the law of distress. Scotch farming was certainly more speculative than English farming. Two or three good potato crops would make, and two or three bad crops would ruin a man in Scotland, and Scotch arable agriculture had depended very much on the cultivation of that root during the last few years. Consequently there were men there, without any means hardly at their disposal, bidding high and extravagant rents for certain farms. The landlord who accepted them knew very well that he could find plenty of security in the men's stock upon the farms; while the tenant on the other hand having very little to lose had a chance of gaining a considerable sum if the seasons were propitious. Further, he agreed with Mr. Gardon that if the law was theoretically bad, that did not matter if it was not unjust in practice. This was, as Mr. Gardon had said, an antiquated law, made at a time when agriculture was very different from what it is now; and therefore in all probability after the lapse of years it required considerable amendment. Perhaps it would be asked, "What have you done in Parliament on this point?" The answer was "Nothing." His constituency had never expressed any opinion on the subject. They had never asked him which way he was going to vote. Throughout the whole of his political career he was not aware that the tenant farmers in Norfolk, with one exception, had said a word to him on the subject. That certainly was very remarkable. But he would engage to say that if he had the honour to represent the county for the next year or two he

should have several questions put to him upon this matter. The history of the law of hypothec in Scotland was worthy of consideration. There had always been a Bill for the abolition of hypothec before Parliament since he had been a member. That Bill had been defeated almost invariably by the votes of the English members. Scotland was entirely in favour of the abolition of the law, Ireland was divided on the subject, and England was against it, because the abolition of the law of distress would immediately follow. This year the Bill was talked out by the "family lawyer" interest, which was not unrepresented in the House of Commons. Two years ago there was a long debate upon it—a sort of "field day" for the junior members of the Ministry. In reference to the call of Mr. McCombie he made a speech on the lines which had been enunciated by Mr. Gardon. He said, that as a county representative he had not been asked by his constituents to vote either one way or the other; that he fancied it would go hard with a great many little men if the law of distress was immediately and unconditionally abolished; that he would not do anything in the world to make the ascent of agriculture more difficult than it is at present; that he desired that the steps taken should be safe and sound; and that notwithstanding all that had been said about the advance it would give the small man, he believed that it would be a rather hollow benefit after all. He was followed in that debate by the junior Lord of the Treasury, who might have been a member for a Scotch county if he could have voted for the abolition of the law of hypothec, and who made a rattling speech in defence of the laws which were no doubt all in favour of the landlord, and he concluded his vigorous speech by saying, at the same time turning to him (Mr. Read), "If you abolish the law of distress there will be nothing in England or in Scotland but the bloated aristocracy of large tenant farmers." That, of course, was said good-humouredly. On that occasion he (Mr. Read) did not vote, and the Bill was lost by a narrow majority of 13. But he had made up his mind when the Bill came up again to vote for the abolition of the law. Why had he changed his mind? Because of the debate which took place on the Agricultural Holdings Bill. Then Lord Elcho and others who opposed that Bill continually said, "What we want is nothing but equal laws between landlord and tenant." The Government thought that the law which gave the landlord the priority of every improvement the tenant made in the soil was unjust, and therefore altered it. And surely this law which gave the landlord a priority over the other creditors could not be otherwise than one-sided, however good it might be in its practical results. Therefore, as the Scotch farmers were so unanimous on the subject of hypothec, he should consider it his duty—whatever might happen to the law of distress—to vote for the abolition of the law of hypothec whenever the Bill came on for further consideration. He should be told that he was approaching this subject from a tenant farmer's point of view, but he happened also to be a small landowner. A small arable farm he let under a just and liberal agreement, and under the Agricultural Holdings Act. Now, he never considered the law of distress to be of any advantage to him when he let that farm to a man of capital. His other piece of land happened to be a grass marsh, the rent of which was paid at Christmas. If he did not let that land to a man of substance, what chance should he stand at Christmas? Perhaps there would only be a few stray thistles or a dock left on the land to seize. Therefore he did not value the law of distress. Then, would the well-managed estates in the county be in any way injured by the abolition of the

law of distress? He did not believe that they would be injured to the value of sixpence. Where the land was fairly rented and liberally managed, as a great majority of the estates of the county were, it would make no difference if the law of distress was repealed to-morrow. But where would it make a difference? On the game farms, and in the cases which Mr. Gurdon had mentioned, where men were trustees, and must grasp the last 6d, there might be a poor life tenant who could not afford to be generous, and perhaps hardly just, towards his tenants; and there might be a mortgagee in possession, who, generally speaking, was a lawyer. No doubt, in these three or four instances, it would be unpleasant to them. A man who went into a game farm was almost broken before he went. Every one knew that game farms were refuges for the destitute. Men would not go there if they could get anywhere else. They went into them with insufficient capital. The landlords were glad to have them. In the first two or three years, if the seasons were unfortunate, down came the landlord and seized the stock, while the other creditors got nothing. He had no sympathy with game landlords, nor with men who extorted the last sixpence, and he was not particularly partial to the lawyer agent who was mortgagee in possession. If these men were injured by the abolition of the law of distress, he did not know that he should grieve. Mr. Taylor's paper led him to believe that he would go in bodily for the repeal of the law. He greatly preferred Mr. Taylor's twenty resolutions of the law of distress, with the exception of that resolution which provided that people should contract for the law. Whether, if the law of distress were abolished, it should be done immediately, whether the landlord and tenant should not have time given them to make their bargain accordingly, or whether it should apply to new tenancies, he would not say, but he cordially agreed with nineteen out of the twenty conclusions, though, if he had gone further and said that he was in favour of the total abolition of the law of distress, he did not know that he should have held up his hand against it. But also there was such a thing as fore-rent. In Scotland they gave the most unlimited credit. A man did not pay 6d. on arable land till he had had the farm eighteen months. In England it was generally three months or half-a-year's credit. In Scotland half-yearly payments were considered fore-rents; and whether the farmer paid on the 1st of April or the 1st of June made no serious difference. It would be said that the landlord would demand his rent when a man took the farm. If he did the tenant, like other people, would demand certain discount for ready money, and to that he did not think there would be any great objection on the part of the tenant. Then he regarded the landlord as one who could not lose more than the interest on his money. His rent was not his capital. The tenant could not run away with his land. As the landlord was the best-secured man, why should he have the preference? Mr. Taylor said that there were four classes interested in this law of distress—the landlord, the tenant, the creditor, and the general public. Beginning with the general public, there was no doubt that the great thing they wanted was to have the land well and sufficiently farmed. There were three impediments to the application of an increase of capital to the land. The first was insecurity, which he hoped was in the way of being modified; the second was that the landlord's preference certainly very much interfered with the credit of certain farmers; and the third was that until there was a return of prosperity, to put money into land it would not pay. Now for the creditors. There was no doubt that in these days the farmers' credit was

somewhat damaged. When they talked of the accommodation the landlords gave them, some would say, "We get more accommodation from the bankers." He had been told that a certain gentleman who contested Norfolk many years ago was angry at the result, because he said that his firm had advanced the rents for the tenants in a particularly bad year. He should not wonder if they now went to a certain firm, they would find that they also now helped a great number of tenants to supply what their landlords demanded of them. The farmer was, no doubt, put into this position by the law of distress—he had frequently to compete against a man of straw. This was particularly the case with the small farmer. They had, no doubt, very little capital, but then they had their industry. Men who had no right to turn farmers went and asked for a piece of land as a favour, and the landlord kindly let them have it. But if the law of distress were abolished, the landlord would consider twice before giving such men the land. They would say justly, "Are you prepared to do what is necessary for the success of small farmers of this country? Are you prepared to do the work of a labourer, and to live at no greater expense? because that is the only way in which a small farmer in these times can succeed." Sometimes they had to compete with men of straw even for large farms. A man of insufficient or no capital would go and offer more rent than the land was worth, and which the man of capital, who knew what the farm was worth, would not think of giving. Then as to the landlords, he did not believe that on any well-managed estate, with fair and liberal rents, the abolition of the law would make any difference. But it would make a difference to the agents and the lawyers, and they would have no doubt to ask a great many unpleasant questions at starting. They had better ask those questions. It had better be known at once whether a man had means to take a farm, or whether he had not. A good many men were anxious to have more land to cultivate than they could properly till; but it would be well for them, before taking a farm, to take care that they were properly breeched. Mr. Taylor had said that the good sense and unexampled moderation of the landlords had made this law tolerable in England. No doubt there had been the greatest good sense and moderation displayed in the way the English gentry and nobility had exercised not only this, but a great number of other laws made in favour of the landlord; but the time seemed to him to be coming when they could with advantage alter not only this law, but several others of the land laws of this country, to the benefit of the owner, the farmer, of the general public, and the labourer.

Mr. Taylor in replying to the discussion, said that he was unquestionably in favour of the abolition of the law of distress absolutely. But it would be a misfortune that total abolition should come immediately. It would be too dangerous a transaction, and an impracticable one.

A hearty vote of thanks was given to Mr. Taylor for his able and suggestive paper, which, it was stated by Mr. Grimmer, had been distributed throughout the kingdom, and had gained much notice.

SCOTTISH.

The half-yearly meeting of this Chamber was held on Nov. 13, under the presidency of Mr. James Melvin, Bounington Mains.

On the recommendation of the General Committee, Mr. W. Riddell, Dundee, Roxburghshire, was elected President of

the Chamber for the coming year, and Mr. T. M. Nicol, Littleton, Kirriemuir, Forfarshire, and Mr. W. Potts, Selkirk, were appointed Vice-Presidents.

Mr. A. CURROR, S.S.C., the secretary, read the returns from the county meetings. These, he said, were very much fewer than they had ever been since he had been secretary.

"From Kincardineshire the Chamber was asked to urge on the Legislature to amend the law with regard to succession duty, so that all heritable property might pay the same as personal. Also that they continue their exertions to get the law of hypothec, entail, and primogeniture swept from the statute book. The Roxburgh meeting recommended the Chamber to direct special attention to the abolition of the law of hypothec. Also to petition in favour of any measure that gave power to the farmer to protect his crop from the ravages of wild animals; also to continue their exertions to get the law of entail and primogeniture abolished, and have the expense of land transfer reduced. Compensation of all unexhausted improvements executed by the tenant should also be kept in view. From Forfar it was recommended that the Chamber petition the Government to introduce a measure in the next session of Parliament for the abolition of agricultural hypothec."

MR. M'LAGAN'S GAME ACT.

Mr. CURROR stated that at the Perth meeting of the Chamber it was remitted to the directors to consider the effect of Mr. M'Lagan's Game Act, but that as the measure did not come into operation till January next, they (the directors) were disposed to withhold their report till a later period. The directors, however, were of opinion that the only remedy for this grievance was that Parliament should confer the power on occupants of land of protecting their crops from game, and that till this was done no satisfactory settlement of the question could be obtained.

Mr. NICOL, Littleton, moved the adoption of the report. In doing so he submitted that almost no measure had been so difficult of interpretation as this Bill of Mr. M'Lagan's. Since its passing, the Act had evidently caused very considerable differences of opinion, even in very high quarters. Some doubt had in the first place arisen as to the time at which the jurisdiction of the Justices ceased; and in the next place different opinions had been expressed as to the position of rabbits under the Act. On the latter question a good deal of alarm had been expressed by the Kincardineshire farmers, the point that required to be cleared up being whether rabbits were raised by the Act to the game list, or whether they were simply referred to for the purposes of the Act. His own belief was that they were only referred to for the purposes of the Act; but, at the same time, they should be glad to hear Mr. M'Lagan's explanations. Regarding the assessment clause, he said, he still considered it a very important feature of the measure, and he therefore regretted extremely that it should have been allowed to drop. The clause in question was the only security which farmers had against fancy figures being fixed by the landlord in regard to game damages. He did not see why proprietors should not be assessed on their reserve game rents as well as upon other points.

Mr. M'LAGAN, M.P., said his principal reason for being present was to speak upon this game question. Nothing had surprised him more than to find that an intelligent body of farmers, such as that of which the Chamber was composed,

had at one instant supposed that rabbits were put into the game list by his Bill. His intention certainly was that no such thing should be done. Last year, when he read the speech delivered at a meeting of the Chamber by Mr. Shepherd, Gleghornie, he was surprised at the fervid expressions of feeling contained in it—from deep despondency up to lofty defiance. On looking over the speech, he found that the cause of all these expressions was the belief that these wretched little animals called rabbits were taken up into the game list by his Bill. He wrote to Mr. Shepherd requesting him to point out the portion of the Bill by which rabbits became game. To this communication he received no reply. Again this year the member for Kincardineshire showed him a letter from some of his constituents to the same effect; but though he asked the hon. member to write to his friends requesting that the objectionable part of the Bill be pointed out, he once more received no answer. In these circumstances he submitted that he had been treated with some discourtesy by Mr. Shepherd and others. Some of his constituents had come to him about the matter, but publicly he held his tongue. He said, "These gentlemen are not accustomed to interpret the phraseology of Acts of Parliament, and I will wait till an opportunity comes round of explaining the matter." He still maintained that rabbits were not placed in the game list by his Bill. What, he asked, was the position of rabbits under the old Game Acts? The fact was that already, under two Acts, rabbits were made game, and that under two other Acts they were mentioned in the protective list—that was to say, penalties were imposed upon all persons found in pursuit of them. In these circumstances it would be apparent that, even though he had put rabbits into the game list, it would have been no novelty. Now, what did he really say about the game list in his Bill? In his Bill it was said that the word game "shall include all the animals enumerated in the Game Acts, or any of them." He had no game list of his own—none whatever. He took care as to what he did on this point. He was pressed in the House of Commons, and pressed by members of the House of Lords, to introduce a game list; but he would not comply with this request. He presumed, however, that what had misled the Kincardineshire farmers and others was the fact that rabbits were mentioned in the body of the Bill under the 4th clause. In this clause it was said that "the sole right of hunting," &c., "rabbits, hares, and other game," &c. So far from that putting rabbits into the protective list, it took them out of it. Every member of the Chamber was aware that landlords generally put into their leases a clause reserving to themselves the right to game and rabbits, and they would no doubt continue to do so. Having that clause in view, he thought it absolutely necessary to mention rabbits in the Bill. Supposing he had only spoken of the sole right of hunting hares and other game, what would have been the result? It would have been this, that when a landlord reserved the rabbits in a lease there would have been no claim for compensation. On the other hand, rabbits being now taken out of the protective list, there was a claim for damages—that was the effect of the Bill. He must say that when interpretations such as he had first referred to were put upon Acts of Parliament, it made gentlemen in London think that the prestige of the Chamber was declining.

Mr. NICOL said the Chamber did not give any such interpretation to the Bill. Mr. Shepherd moved a resolution to that effect; but to this he moved an amendment.

Mr. BETHUNE, of Blebo, explained that what the Chamber did was to defer consideration of the Bill.

Mr. GOODLET, Bolshan, asked Mr. McLagan to clear up one point. In the Bill it was stated that all game and other animals enumerated in certain Acts should be protected. Now, were not rabbits enumerated at a former period in these Acts as game, and did not the mention of them in that connection in Mr. McLagan's Act constitute them game?

Mr. McLAGAN said he had not put rabbits into a different position from what they were in before.

Mr. GOODLET: You should not have kept them there; you should have put them out.

Mr. McLAGAN said his object was not to interfere with any game-list at all. The fact of rabbits being mentioned in his Act was for the purpose of enabling the farmers to obtain compensation for any damage which might be done by them. If he had not mentioned them, farmers would not have been in that position.

Mr. BETHUNE thought Mr. McLagan had cleared up any misapprehension which existed in regard to the point in his Bill brought under notice. Whether his Bill would be a good one or not he scarcely knew yet. He was of opinion, however, that Mr. Goodlet had hit the mark; for he was inclined to believe that until the agricultural tenant was able to protect himself from hares and rabbits, they would never have a good Game Bill for the country. The only Bill which he considered worth a button was the original Bill of the Chamber, taking hares and rabbits out of the game-list altogether. That was all the length he could go at present in regard to game reform.

Mr. McCULLOCK, Denbie Mains, Dumfriesshire, said that, like Mr. McLagan, he considered that rabbits were only made game for the purposes of the Act—that purpose being entirely for the protection of the farmers, not for the protection of game.

Mr. McLAGAN wished to correct his friend who had just said that rabbits had been made game for the purposes of the Act. Now they were not made game at all. He wished them to distinctly understand that.

Mr. NICOL remarked that it was quite clear that rabbits were game, but that Mr. McLagan did not make them so.

Mr. McLAGAN pointed out, in reply to Mr. Bethune, that while rabbits were mentioned in the game-list, farmers had complete power over them. Of course, if they signed a lease under which the landlord reserved the rabbits, they had themselves to blame.

The CHAIRMAN said that whatever difference of opinion there might be about Mr. McLagan's Bill, he was sure they were all very much indebted to the hon. gentleman for attending at this meeting to explain its clauses in the way he had done.

PRESIDENT'S RETIRING ADDRESS.—Mr. MELVIN, in vacating the chair, delivered the usual retiring address. After remarking that neither the highest skill nor the greatest foresight could successfully avert the consequences of such a sunless, rainy season as had just closed, he said it seemed to him that the effect of the one-sided unequal laws under which the farmers carried on their business made the suffering more keenly felt. Even under wise and judicious landlords, whose object had been fairly and justly to deal with their tenantry, this season must be felt. To those tenants, however, who would not otherwise have been accepted unless under the security the law of hypothec afforded, and at such rents and with such terms as it might impose, and who had had squeezed

out of their hands much of the return from the land which ought to have been invested in improving its condition, and to form a reserve for a bad season, the consequences must be serious indeed. Unlike certain associations in other lines of trade, it was not the province of this Chamber to interfere between landlord and tenant or labourer; it was only open to them by free discussion to place their views before the public, and trust to their intrinsic merits to secure their adoption. Last November, when they did him the honour to place him in this chair, he tried to show that further improvement in farming in Scotland had been checked; that the money which might have been enabling them to extend the area of their cultivated land, and the quantities of its produce, was being invested in foreign loans; and that the landowners' trust in the fancied security of hypothec, in the right of leasing the same land for growing cultivated crops to one party and to another for wild animals, and in the law that whatever the tenant put into or upon the soil became the landlord's, were the main reasons for stagnation. It would be in their recollection that though live animals were admitted freely in 1843, it was not until after the year of the potato disease, 1845, followed by their entire failure in 1846, that the Corn Laws were abolished. Might they not hope that after the impoverishing season of 1872, followed by the present still more disastrous one, a similar action might take place, and all legal protective enactments of which they complained be withdrawn. That such stagnation as he had pointed to existed Mr. Melvin illustrated by reference to Mr. Hall Maxwell's agricultural statistics—these showing that there was less arable land under cultivation now than in 1854, and also less growing green crops. There were, for example, 120,000 acres less of wheat now than twenty years ago, and there were 228,000 acres less under a rotation of crops. It was quite apparent why less wheat was grown—the price having fallen, and that of barley risen since Protection times; but it was not so apparent why 1-15th less corn should be sown and 1-13th part less cultivated. It might be said with truth that much land that is cultivated was poverty-stricken for want of manure. The Duke of Argyll, in his essay on the Hire of Land, said:—"There are wide areas in Scotland where the land is all cultivated. But, on the other hand, there are much wider areas where every farm has more or less unreclaimed land; some old outfield to be taken in, enclosed, drained, and freed from stones; some hill slopes over which corn and turnips may be made to invade the heather. Not only is this the general condition of all the Highland counties, usually so called, but it is the condition of every district in the Lowland counties in which there are hills and moors. In other words, it is the condition of by far the largest part of Scotland." It was quite true there was a great extent of land in Scotland which could be reclaimed, and carry turnips and corn. His Grace said that portions of what had been improved had returned all the cost within five years, thus amply recompensing the tenants who took it in hand under the usual leases. This might or it might not be true, but did it not seem very curious why so much land which would pay so well for being improved was not so? It looked almost as if the Scotch tenants were lazy loafers, or utterly impecunious, when they not only left such rich investments untouched, but even cultivated less than they did twenty years ago. Their first president and much lamented friend, the late Mr. Hope, and other gentlemen had more or less fully pointed out that the effect of the Land Tenancy Laws in Scotland was to check progress

and paralyse industry, and to drive capital out of farming. It was only human to cease to grow valuable crops when they were liable to be destroyed by wild animals. It was equally so to cease to improve when another reaped the benefit; when the ignorant and incompetent were preferred to the honest and skilful, the honest and skilful stood aside. When examples were made of some of the men who had placed the real facts of the case before the public, though their statements were true, and had been fully corroborated, as in the revelations as to farming failures in East Lothian life and the Curse of Gowrie in the pages of *The Scotsman*, what could they look for? No one now doubted that Free-trade measures had not only added to the greatness of the British Empire, but also to the greater culture and comfort and means of living of the labourer. Why, then, should the tenantry be the one class who had not profited by the change?—simply, he said, because all they had to sell or buy was sent to a market regulated by Free-trade principles, while they occupied their land, out of which they were to manufacture their products, under thorough Protectionist laws. This falling off in the land under crops during the past twenty years in Scotland was the effect of that system when not only should there have been no decrease in the area under cultivation, but there should have been a very great increase. With an extent of land unreclaimed, and so fully capable of profitably being so as was represented by the Duke of Argyll, the public should see that this Chamber had for the last fourteen years not been the reckless agitators some people had represented them to be, but that the laws of which they had been complaining had restricted progress, and denied to the tenant farmer the corresponding prosperity which his own labourers and all other classes of the community had enjoyed. It was high time their legislators should look fairly in the face the fact that Scottish agriculture had become stereotyped; if not retrograding, and do what legislators could to make the conditions under which it was conducted equitable and just to those engaged in it. They asked no special privileges, they asked no protection; they simply wanted the laws made straight between both parties. The alternative of equal legal exactments to those enjoyed by the landlord he did not enter on. He preferred the withdrawal of all preferential rights which the landlord at present enjoyed, and wished none in favour of the tenant. When that was done the farmer could make his own bargain. If he made a bad one he was alone to blame, not as at present when thousands of tenants found themselves in a position which these protective laws had subjected them to—when the tenant must either give up all the funds invested in the land or become the dependant of the landlord, subject to his will politically as well as pecuniarily. Others again, though in a better position, felt that the 19 years' lease told against them, especially those who entered into agreements previously to 1872, taking their land at the rents fixed by valuers. These tenants had infinitely more reason to complain of the rents they had now to pay than had the Duke of Argyll and Lord Abinger and other Highland landlords of the Highland sheep valuations; for the obvious reason that the land valuers previous to 1872 never took into calculations the occurrence of such disastrous seasons as 1872 and 1877, as none such had been experienced for many years previously. Had two such seasons been taken into their calculations, the rents must have been fixed much lower than they were. Mr. Melvin then went on to notice the proceedings of Parliament last Session in so far as these affected agricultural

interests. Touching on Mr. M'Lagan's Game Bill, he criticised the action of certain members both in the Commons and Lords in regard to it, and remarked that it showed how in class interests both Whig and Tory could agree; for assuredly if the Duke of Richmond and the Tories had been able to look beyond their own rights, it would have been a capital opportunity for dishing the Whigs. As it was, the Tories and Whigs united to dish the Liberal minority of the Lords and the principle of Mr. M'Lagan Bill most relied on by some of its advocates. Mr. Melvin also explained what had been done in regard to the Bill for the abolition of the Law of Hypothec, and pointed out that while in the case of the Game-law Bill of Mr. M'Lagan there was no hesitation in adopting different laws for Scotland and England, yet in the case of hypothec the chief argument for its rejection was that as there was a similar law in England, it would not do to allow hypothec to be removed in Scotland. The light even on this question seemed to be breaking in upon English agriculturists. Mr. Clare Sewall Read, who formerly voted against the Abolition Bill, now said that he intended supporting the Bill. Such support coming from a practical man of the intelligence and influence of Mr. Read was a sign of the times which could not be mistaken. When such members as Lord Elcho declared they maintained hypothec in order to prevent injury to small tenants, the hollowness of their reasons was very transparent, seeing notwithstanding hypothec, their estates were now nearly clear of all succ. In conclusion, Mr. Melvin spoke of what he considered the only satisfactory business of last Session—the report of the Committee on the cattle plague and cattle importation, and expressed a hope that its recommendations might be adopted by Parliament next year. The Chamber, he thought, should petition Parliament in terms of the Committee's report.

ADDRESS BY THE PRESIDENT-ELECT.—Mr. RIDDELL took the chair amid applause, and shortly returned thanks for the honour they had done him. At the outset of a short address he then delivered he referred to the services of Mr. Melvin, the retiring president, in the cause of agriculture—mentioning more particularly the evidence he had given before the Cattle Plague Committee; and also complimented Mr. Goodlet for so promptly meeting and confuting the views of the Duke of Argyll on the Agricultural Holdings Act of 1875. They should endeavour not to fall into the same error as the Duke of Argyll did when he wrote that article, ignoring every interest except those of the class to which he belonged. He (the Chairman) expressed the hope that when they discussed and considered questions affecting agriculture they would not look at them simply as they were likely to affect themselves exclusively as occupiers of land. Such restricted and selfish views would, he felt perfectly confident, lead them into the same mistake as the noble Duke. On the other hand, if they dealt with any law on the principle of equity and justice, irrespective of consequences, they would not only benefit themselves, but ultimately, if not at once, benefit the owners of land and perhaps, not least, be of great advantage to the general public. All classes were too apt to look at public matters in the light of self-interest. That had been brought prominently out by landed proprietors holding such a firm grip of these class laws they had from time to time tried hard to get repealed or amended, but, as yet, had not succeeded. The law of hypothec appeared to be something like the keystone of an arch: by removing it the whole fabric would soon tumble down. Farmers were taunted with entering on farms and agreeing to conditions utterly at variance with their prin-

ciples and professions. The reason why was not far to seek. Men brought up to farming could not all at once turn their attention to anything else, and should they decline to accept of conditions offered, there had always been men ready to step in and run any risk. He hoped that the wave of adversity flowing at present over the agricultural interest would teach farmers a lesson that would be long remembered. He ventured to say that unless farmers acted with more independence at the polling-booths than they had been in the habit of doing, there was not the shade of a chance of returning men to Parliament who would sweep off all these class laws relating to land which still existed, and the abolition of which would place contracting parties on the same platform. All that was wanted was equal laws and no favour; then, and only then, could there be freedom of contract. The moment farmers breathed the atmosphere of freedom—freedom to contract—it would lessen the necessity for an Agricultural Holdings Bill.

CATTLE PLAGUE REGULATIONS.—In accordance with the suggestion of Mr. MELVIN, it was agreed that the Chamber should present a petition to Parliament in regard to the cattle plague regulations.

THE ABOLITION OF HYPOTHEC.—Mr. JOHN WILSON, Chapel Hill, moved—

That the Chamber apply to the present Government to introduce a Bill to abolish the law of agricultural hypothec, and failing their undertaking to do so, to request Sir Robert Anstruther and Viscount Macduff to introduce a Bill into Parliament in the ensuing session for the abolition of the said law of hypothec, and to remit to the directors to carry out this resolution.

Circumstances, he said, had altered very much since this question was first agitated. Then the excuse for not dealing with it was that public opinion was not united in regard to what should be done. He ventured to say that now there was no social or political question in Scotland upon which opinion was less divided. With one single exception, and that was the county of Haddington, the county members of Scotland were all pledged to the abolition of hypothec.

Mr. HARPER, Snawdon, said that Lord Elcho had become a convert.

Mr. WILSON said he was glad to hear that, for now it could be said that Scotland was unanimous on the point.

The resolution was agreed to.

"WILL THE AMERICAN BEEF DO BRITISH FARMERS ANY HARM?"

Just as surely as the newly-introduced American, who was always glad to make my acquaintance, would mutter in the second breath, "How do you like our country, sir?" my good Scottish farmer friends since my return have pointed their first questions in something like this fashion, "Well, is that American beef to do us any harm?" "Will the Americans drive us out of our own markets altogether?" It is evident that though farmers and others interested in land still watch the American beef trade with some concern, the anxiety on the subject has been greatly allayed since last spring, and I think there is good reason why it should. It is my opinion that the American dead meat trade will not be anything like so injurious to British farming as it was at one time feared it would be. During the spring months of the present year the alarm was very great and general; and while some enthusiasts predicted all but wholesale ruin, the majority of writers and speakers told those who had long leases still to run, that, at any rate, they might expect to suffer heavy losses—"the backs of many of these tenants would be driven to the wall," was a favourite expression. These alarming statements were made under the impression that American beef of good quality could be retailed in this country at a profit to shippers at from 5½d. to 6d. per lb.; and had that belief been really well founded there was indeed serious cause for alarm. But any one who has glanced at the figures of the last two letters will easily see that this impression was entirely erroneous. Some, however, may ask, can these figures be relied on? Well, as to that, it can only be said that they are the result of four months' impartial inquiry, directed very largely to the money part of the question, for undoubtedly that will be the ruling element in this as in every other similar trade.

Though there is no probability that the importation of American beef will prove disastrous to the farming interest of the British Isles, still it is certain to exercise a very important influence in the returns from beef-raising in this country. It is not likely to reduce the production of beef to a non-paying

branch of farming; nor need there be any grave fears that it will "drive the back of many a tenant to the wall" that happens to have a long lease still to run—if these are not rack-rented they will manage to live yet; but the fact remains that a new opponent, not death-bearing, but formidable, has come into the field; and it is a matter of the greatest possible importance that farmers should watch carefully every movement of that new opponent, and use every endeavour to meet him advantageously in a fair open field. What the repeal of the Corn-laws has been to the cultivation of grain in this country the invention of refrigerators is likely to be to the raising of cattle. That great repeal movement regulated the price of grain in our home markets, or at least prevented them from reaching an exorbitant point; and undoubtedly the importation of foreign dead meat, which has been rendered possible by the invention of the preservation system now being used in transmitting American beef across the Atlantic, will ultimately have a similar effect on our home beef markets. All the foreign competition we may expect in our beef markets is not likely to reduce the retail price of our native beef beneath a figure that ought to be fairly remunerative to its producers—say, from 72s. to 80s. per cwt., or from 7½d. to 8½d. per lb. for the best qualities, and from 62s. to 70s. per cwt., or from about 6½d. to 7½d. per lb. for second-rate beef; but it would be unsafe for farmers to calculate upon beef rising to such high figures as it has reached several times during the past few years. In all probability beef has reached its maximum value in British markets; indeed, he would be a little venturesome who would tell us that the top prices for beef in the home markets in 1887 will be as high as they are at the present time. It need hardly be expected that ten years from now the average price of beef will be relatively as high as to-day, for by that time the foreign competition will to a certainty be far more powerful than it is now, or can be for some time. Fortunately for those whose long leases have only recently been renewed, the surplus supply of beef in America that is suitable

or consumption in this country is not yet so large as to make the immediate influence of the importation trade very manifest on our beef markets; but then the means of production in that country are practically unlimited as far as food is concerned, and are in the meantime regulated only by the material it command for effecting the requisite improvement in the native stock. There are no permanent reasons why America cannot produce as good beef as either England or Scotland. It can grow the food if it only had the cattle to make a proper use of it. These it will by-and-by have, and when Americans come to see the advantage of careful, liberal, and systematic feeding, it may be relied on that they will not be slow to adopt it. The improvement in the course of eight or ten years will in all probability be wonderful; and by that time, if the present high price of beef continues, we may expect that American beef of really good quality will be poured in upon us in large and steady supplies. No one anticipates that the cost of beef production in America will increase to any appreciable extent for more than ten years to come; and if the anticipation is well founded, which I think it is, this improved beef of the future may be offered in our markets at from 6½d. to 7½d. per lb. The improvement of the cattle of America and the system of cattle feeding is only a matter of time; and when that has been achieved the competition in the beef markets of this country will in the main be a handicap race between the British Isles and the Great West, the former having a start to the extent of about 1½d. per lb. My conclusion, therefore, is that, in the meantime, there is no real cause for alarm; but that our farmers may take it for certain that henceforth the beef markets of Britain will be open for foreign competition exactly as our grain markets have been for forty years; and that by-and-by the foreign influence in the one will be as great as in the other.

Though the immediate influence of the importation of American beef is not likely to be so serious as some feared it might be, still the prospects are sufficiently gloomy to demand that every possible effort should be made to fortify the position of the home producer; and next week reference may be made to what ought to be done in this direction. It will be observed that the weekly imports of dead meat are increasing very largely, and also that the shipments of live cattle are far from insignificant. Live animals can be speculated with for a little after their arrival, and consequently it is not so easy to ascertain the exact financial success of this enterprise as of the importation of dead meat, where a final sale has to be effected at once. One would think, however, that the shipping of live cattle across the Atlantic during the winter season would be anything but a safe undertaking. The dead meat trade will undoubtedly get a thorough trial this winter, and the chances are that, as in spring, it will be overdone. The arrivals of fresh meat at Liverpool last week from the United States and Canada amounted to 3,948 quarters and 440 sides of beef, and 17 carcasses of mutton—being the largest weekly arrivals at that port since the first of summer. These large supplies, it is stated, over-stocked the market, and, as a consequence, "sides of prime quality were disposed of at the very low rate of 4d. per lb." That is, indeed, a very low rate and if these sides were anything like what they are described as being, those who shipped them will look aghast on receiving their returns. The loss must be at least 1½d. to 2d. per lb. If the Americans are not more cautious they will undoubtedly suffer heavy losses; for it is very plain that only a small quantity of

American beef of such quality as that which is now being imported will find sale in this country at the present time (or indeed at any time) at anything but a sacrifice. It is important to observe that one of the firms who have been most largely engaged in the shipping trade, both of live cattle and dead meat—Messrs. Samuel Brothers, of New York—have become bankrupt, and that their collapse has been brought about mainly by heavy and continuous losses in the export trade. Probably this is the beginning of that "thinning-out" process which was jocularly referred to by one of the principal shippers while the writer was discussing the subject with him about two months ago! At any rate, it need surprise no one that the failure has taken place, for beyond all doubt the enterprise as yet has not been a profitable one to those engaging in it. Too many have rushed into it, and there has been by far too little caution and too much enthusiasm—never-failing characteristics of American enterprise.

As yet very little of the best quality of American beef has been imported this season, and until the demand improves somewhat, which it probably may during winter, only small quantities of it will be attempted. The beef that is now being imported is of second quality, or the beef of second-rate grades (better, however, than the common cattle of America), picked up in the stockyards of Chicago and New York, and raised and fed mostly in the States of Illinois, Kentucky, Ohio, and Indiana, and neighbouring States. In New York these grades cost from 8½ to 9 cents per lb. of live weight, which would represent a cost price in Glasgow or Liverpool of from 5½d. to 6d. per lb. of dressed beef. These facts were stated a couple of weeks ago, but they are repeated here in consequence of the existence of a wrong impression in some quarters as to the quality of the beef that is now being imported from America, and as to what part of that country it really comes from, which latter point of course very significantly affects the cost price in America of the imported beef. A correspondent, writing to a recent issue of an important English newspaper, says that the quality of the imported American beef has been "entirely changed from last year, because the full-grown, well-fed oxen that were then available have been exhausted, and the steers that are now grown are not fit for market. The beef of Texan cattle is the only kind that has been brought, via New York, for several months." Now, this is the very season of the whole year that the "full-grown, well-fed" oxen of America are available to the butcher in the largest numbers, and the reason why their beef has not been coming to this country is simply because it pays better to keep it at home. The latter statement of the correspondent referred to is as ill-founded as his first. All other varieties of American beef will fail before the beef of Texan cattle will have its trial.—*Scolman*.

A MAHOMMEDAN CRITICISM OF DICKENS.—The following critique, in the handwriting of a Mahomedan gentleman, the late owner of the volume, was found on the last page of a copy of "David Copperfield":—"I surmise that this book's author being the composer of many other novels has got such a style without taste. Though its style is very regularly made, yet the mind of the reader is never willing to see even a page thoroughly. It seems to me that its author was not an intelligible. Those difficulties which I suffered during the course of the study of this idle book I can't express them. Sometimes the wretched author tries to write and deliver some oration, yet suddenly he falls in a pit of dullness. In short, this book is quite an unpleasant to the heart of the glowing heart. Let the reader see and confess my observation!—S. S. R.—*Public Opinion*.

WENSLEYDALE AND ITS DAIRY FARMING.

Not many of your readers will have heard of the Dale of Wensley, or of the former fame of Wensleydale cheese, which I regret to report do not stand so high in public estimation as they once did. This valley is in the North Riding of the County of York, and until the Midland Company opened its new line to Carlisle this locality (near Hawes) was equi-distant (sixteen miles) from four railway stations, namely, Ingleton, Sedburgh, and Kirkby-Stephen, on the West, and Leyburn on the East. Now the new Midland line brings us within six miles of here, and soon that company will cover that six miles by opening a branch from "Hawes Junction" to Hawes. Heretofore this place could not be reached except by the special hiring of some vehicle, for no public conveyances ran to it from any of the four railway stations named. Hence, up to a very recent date, it was truly a very "out-of-the-way" region; and, as might be expected, the ways of the people are of a very primitive character. The river of this valley is the Yore, which has a very serpentine course, with several cascades. The valley gets its name from the pretty and quiet village of Wensley, which may be considered the foot of the dale as Hawes may be called the top of it. The total length of Wensleydale from Wensley to here is fifteen miles. The valley is not a wide one, and, as is generally the case, it narrows as you travel upwards. Here it terminates in a very fine amphitheatre of hills. The Yore as it flows past this place is about 700 feet above the sea level, and the surrounding hills attain an elevation of from 1,400 to 1,800 feet. Speaking roughly, the hills are covered with excellent meadows and pastures for fully two-thirds their height. Indeed, I have seen good meadows 1,200 feet above the sea level. The lower lands of the valley consist of rich grazing ground devoted to cattle feeding; but this is not extensive here, cheese and butter-making being the main stay of the farmers around this place as well as for half-a-dozen miles down the vale. Of course, as in all such hilly countries, large numbers of sheep are kept. The breeds here are, for the high lands, Scotch black-faced sheep, and for the low lands a half-bred sort of a cross betwixt the Highland black-faced with Leicester tups. The cows are mostly of the Shorthorn breed, which having been bred in the district have got acclimatised, as indeed they need to stand the severe winter which often sweeps down this valley. No grain is grown for six miles below here, nor any turnips or other green crops. Old pastures and old meadows are the sole covering of the valleys, and the cultivated part of the hill-sides for the distance I have named. The soil of the lowest lands through which the Yore flows is generally of great depth, and is a rich loamy gravel. That of the grass lands on the hill-sides is a fine loam, in some places a little stiff, resting upon hard blue limestone. The meadows are full of herbs, and the hay is said to be very rich, cattle being made fit for the butcher when fed solely on it. The food of the cows being restricted to the old pastures and meadows, and rich hay, the butter at all seasons of the year is of pure flavour. I never saw at any other market than Hawes such a large majority of samples of butter of good quality. Though this locality seems greatly shut out from the busy, bustling world, yet Hawes is a great centre towards which farmers are drawn to its cattle and sheep fairs and its markets. As an illustration I may state that in spring, before cheese-making commences, as much as 7,000 lb. of butter has been purchased here on a single market day; and

even now the quantity will be about 3,000 lb. each market. In the spring of this year a public butter market was opened in a large room attached to the White Hart Hotel, and the butter buyers are unanimous as to the great improvement in the quality of the butter which has been secured by a weekly public exhibition, affording an opportunity for comparison, and a stimulant to be first as to appearance and quality. The Londoners would rejoice in the fine, firm, and delicious butter I have bought here for the last four weeks at 1s. 6d. per lb. of 16 ounces. I name the ounces because at Richmond, about twenty miles from here, and also at Bedale and other places, butter is sold in rolls of 24 ounces. Of course as you get down the dale, beyond six miles below here, green crops and some little grain is grown. One thing which strikes a stranger, bent upon agricultural observation, is to see in every third or fourth meadow a hay-barn. These substantial stone-built barns have a cow house at one end, over which hay is stored, while at the other end of the barn the hay occupies its full height. Some few of the barns have a cow-house at each end. Generally these barns accommodate eight to ten cows; some few more. I was over a farm where eight or nine cows, and the same number of calves are kept, and on it there are four hay barns! By this arrangement the hay is carried into the barn from the field where it is grown, with, perhaps, the next adjoining on each side. The manure from the cows, like the hay, requires carrying the least possible distance, thus minimising labour. This mode, in a hilly country like Wensleydale, seems the most advantageous. The cows, when in the old pasture land, are milked in the fields, standing most quietly during the operation. Thus the animals have never to be driven to and from shippens as in Lancashire. The milk is carried to the farm-house in a way I have never seen elsewhere. Here they have large tin cans, or "kita," called "budgets;" these are of various sizes, generally holding from four to six gallons. They are much the same shape as some cans used in carrying milk by rail, except that one side is made concave instead of convex, so as to fit the concave side of the can to the back of the carrier of the milk, who has it fixed by strong leather straps, exactly after the plan of a soldier's knapsack. The milk is thus carried various distances, just as the pastures or meadows are relatively situate to the farm-house. Some are distant above a mile. To a stranger it is a novel sight, morning and evening, to see the men flitting about with their "budgets" on their backs; and more singular still to see a few females laden with them, for the thrifty hard-working women shoulder their loads like men, and show what they can do in the dairy line. And now having traced the milk to the dairy, let me record how it is dealt with.

There are two modes of making cheese here, which are still distinguished by "the new way" and the "old" one, though the "new" has been now practised for about twenty years. This "new" method is the simplest and shortest one I have ever seen. Whether it would answer in cheese of larger size I cannot tell; I doubt if it would. The small cheese here made after the "new" mode (those I have seen) are of good quality. I ought to state that the largest cheese made here is less than 20lb. weight; the greatest portion I here noticed vary from 10lb. to 15lb. each; some are as small as 4lb. and 5lb., for cheese are made here from a dairy of five, four, and three cows! The shape of these small cheeses are not deep, like the

little "truckles" of Wiltshire, but flat-shaped, except where they copy that of the very deep Stiltons. Generally the dairy consists of seven to ten cows, but a few run up from 16 to 30 cows. So wedded are they to small-sized cheese that in the largest dairies they will make the milk into three cheese per day, where in Lancashire it would be made into one. At a farm I called at, where seven cows were kept, two cheese per day were made. They do not use a large cheese tub, as in Lancashire, for curdling the milk, but this is done in the "cheese kettle." The "kettle" is a large brass or copper pan, exactly like those used in Lancashire for heating the whey. In some few cases the kettle is of tin. The night's milk is passed through the sieve into the "kettle," where it remains until morning, when it is placed upon the fire to heat. When got to the proper temperature, it is removed and placed upon the floor, and the morning's milk is run through the sieve into the "kettle," mixing with the heated night's milk. In the large dairies, where the kettle will not hold all the milk, a small tub is also used, and there two persons can be employed in making the cheese at the same time. It is strange what various provincial terms are used for the same article; for instance, what is generally known as a vell is here called a "kealop," and in Lancashire a "bag-skin." Again, while the rennet is known in the latter county as "steep," here it is called "prezzur." I once took an intelligent Scotch farmer to one of our choicest Lancashire dairies, and after he had thoroughly questioned the maker as to the various processes, he exclaimed, "Oh, my, my! its aw done b' the rule o' thumb!" In other words all by guess work. Here they say they "mak um b'th greap;" which, explained, means by the feel—testing the heat of the milk and the state of the curds by the hand. The "prezzur" is made either every day, or alternate days, by cutting a piece from off two or three "kealops" and letting it stand about 24 hours in cold water which has been previously boiled. It is made in a pint mug or cup, and its strength is, of course, guessed at. The "new" mode of making is shortly as follows:—The night's milk being heated in the "kettle," and the morning's milk being added to it, the pint of "prezzur" is poured into it and well mixed. It then stands about from half-an-hour to three quarters to coagulate. It is then very gently broken up by the hand into very small pieces. At some farms a breaker is used made of wire crossed as in a riddle, something like the Lancashire breaker; but the shape is circular, and they are of very small size. They have not an upright handle, but a part of the outer wire rim is drawn out, and bent, so as to form a short handle. In the breaking by the hand the movement is, of course, upwards, but by the breaker it is downwards. The breaking, which occupies about an hour, being over, the whey is removed by lading it off. Then the curds are placed in a circular tin about 11 inches across, and about 4 inches deep, the sides and bottom of which is very full of perforated holes about the size of the bore of a large quill. The tin-full of curds is then left to drain for about 3 hours, when it is reversed and left for three more hours; then its contents are transferred to the cheese vat, put to press, and kept there for nearly 24 hours, after which it is floated in "pickle" for three days, just the same as the system of "brineing" in Lancashire. I got the maker to test for several days the temperature at different stages, with the following results:—

Heat before curdling.....	95 to 98 degrees.
Heat after adding hot whey.....	94 to 97 "
Heat when vatting	84 to 89 "

The maker stated that in summer the temperature at curdling was kept lower than at this date (October 20), it being, in the warm weather, set to coagulate at the same heat as the milk stood when brought from the cow. The pickles or brines are made on the customary plan in Lancashire—boiling the salt in water, the liquid when cold being made the strength that an egg will float in it. A little dry salt is placed on the top of each cheese as it floats in the pickle, and this melting gets mixed, and so keeps up the strength of the pickle to the original standard. All the cheese are slightly coloured by the use of cake annatto. The climate here is low in temperature, with a very large rainfall, and the cheese-rooms not being heated, the cheese are kept colder than in any other county in England or Scotland where I have travelled. Up to fog time the cheese is kept a week in the cool room, where it is pickled, and then removed up stairs to ripen; after the period named they are, in some places, kept for a short time upon a shelf, which is suspended from the ceiling of the kitchen, and about the middle of that apartment.

Now for the "old" mode, at which I assisted in making a cheese from the milk of five cows. The night's milk being heated in the "kettle," the morning's milk—which stood at 82 degrees before it was poured out of the "budget"—was added when the whole contents of the kettle were 102 degrees. The maker "b'th greap" found it was too hot, and so added some cold water, remarking, "You see the cheese will be no poorer, for this (the water) all will go into the whey." This reduced the milk to 100 degrees. A pint of "prezzur," together with the piece of "kealop" which had been used in making it, were put into the milk, and which was well stirred to secure a thorough mixing. It was covered over with the wooden lid of the "kettle," and left to stand 35 minutes, the temperature of the place being 40 degrees. When beginning to break up the curd with the hand, I found the contents of the "kettle" had got down from 100 degrees to 89 degrees. The breaking up occupied half-an-hour, when the maker, having previously put a pan of whey upon the fire to heat, poured it upon the broken-up curds, and brought up the heat again to 100 degrees. She remarked that at this cold season of the year it was needful to keep up the heat of the curds higher than in summer, otherwise, in place of feeling "sharp," they got to be pasty, and stuck in the card mill or "grinder," as they call it). The broken-up curds remained to settle for about three-quarters of an hour, when they stood at 90 degrees, and the whey was removed in the way before named. The curds, which were then at 82 degrees, were put into a cheese vat, which was lined with a dry cloth. After standing for about half-an-hour to drain in the cheese press, with a light weight applied, the mass of curd had got down to 65 degrees. It was then cut up into small lumps, and then placed in a vat with a dry cloth, where it was again placed to drain, and this process was afterwards once again repeated, about two hours having been occupied from the time the curds were first put in the vat. At length the mass of curds were cut up and ground in the curd mill, the heat of the ground curd being 55 degrees. They were finally vatted into a Stilton-shaped vat, and placed in the cheese press remaining there for nearly 24 hours. At the expiration of that period the cheese has a stout calico bandage stitched upon it, when it is put into pickle, where it remains three days. When taken out of pickle it is not washed either in cold or warm water, but simply wiped dry with a cloth. On a subsequent day I had the curiosity to weigh the milk and weigh the cheese produced from it after it came out of the press; the

weight of the milk was 91½ lb., that of the cheese 10 lb. 14 oz. This result agrees with that of many tests. I may quote one Derbyshire cheese factory. In May, June, July, and August the weight of milk required for one pound of cheese ranged from 10 lb. 4 oz. to 10 lb. 1 oz.; in September, 9 lb. 8 oz.; and October, 8 lb. 10 oz. Another maker on the "old" mode, but who has them the ordinary shape (not deep, as the Stilton shape) lets the curdling of milk occupy nearly, and sometimes quite, an hour, and the time from breaking up to putting it to drain in vat alone another hour, and lets the draining and cutting up and re-draining of curds occupy four to five hours. Though the cheese are only about 12 lb. weight, she presses them for 48 hours, and keeps them in pickle three days. The temperature at which she operates now (Oct. 20) is as follows: Setting to coagulate, 98 degrees; commencing to break up, 90 degrees; placing to drain, 80 degrees; final vatting after grinding, 60 degrees. It will be noticed that no hot whey was used by this maker. Though the Wensleydale cheese are so small, and the ordinary shape rather thin, yet most makers keep them in the press for 48 hours. I find that a very great majority of the dairies are made on the "old" method and of the flat shape.

Formerly, Wensleydale cheese had a great name, and even now the choice dairies, sold retail—especially the Stilton shape—fetch high prices. The greatest weights are sold into Durham and Northumberland, largely finding their way into the dealers' hands from the fairs at Yarm. One of these was held on Oct. 23rd, when above 100 tons of cheese were shown, all of small size. The very top prices were 75s. to 80s. per cwt. of 120 lb. The greatest consumers of these cheese are the miners in the counties I have named, and as these are not particular to that fineness of flavour so much insisted on at our great cheese competitions, the Wensleydale pass muster with them as first-class flavour, owing to their richness in quality covering other deficiencies. The makers take a great pride in their cheese being *honest*, which is their very appropriate way of stating that the milk from the rich pastures has not had a particle of cream abstracted from it but has been "honestly" manipulated. One maker, speaking of a visit to a Lancashire dairy, said: "These (the Lancashire) cheese are not honest, they tak a pund o' butter o' con oot ov um." Certainly most of the cheese here are "honest," but the great bulk are not fine flavoured. I hear, on the other hand, that far more "dishonest" cheese are made than formerly, and that is given as a reason why the Wensleydale cheese have got so much lower in public esteem. Of a certainty that will be one reason, but I think the refinement as to flavour which has been growing for some years in consumers may have something to do with the loss of estimation. Speaking of cheese of various counties, one of rich quality, with a flavour which twenty years ago would have been favourably regarded, is now thought very inferior; and this is not alone by judges (who set aside all such as are unworthy of notice) but also by the larger number of consumers. Another reason why Wensleydale cheese are gone down in public esteem is the very bad way many are kept from November to spring. The climate is cold, and during that portion of the year excessively wet, and many of the houses damp. And yet at no house did I see any arrangement for even securing thorough dryness, to say nothing of warmth, both of which are required here to bring the late-made cheese into fair condition. As the cheese are now kept during the period I have just named, there is no

wonder if they get a bad name; the wonder is where the consumers are found for such badly-kept and anripe cheese. As to appearance, contrasted, not with the fine deep well-kept Cheddars, but with such a show of Lancashire as seen at Lancaster cheese fairs, the Wensleydale cheese look very inferior. Besides the smallness of size, they are kept in rooms of a very low temperature, and often, as the season advances, get a coat akin to the colour of a Macadamised road. If the makers were anxious to regain the former character of Wensleydale cheese, they would cease making much earlier, and turn their milk to butter. They should also adopt some plan of keeping them warmer, from November to April. They ought to either have hot air pipes fixed behind the kitchen grate or a small stove in the cheese rooms, on shelves suspended from the ceiling of the kitchen. I have already stated that some dairies were made from as few as three cows; within a few doors from where I write is a dairy made from two cows. A few days ago, noticing some of the smallest cheese I ever saw, I found they were made from one cow! When officiating as judge at the great Cheese Show at Frome, two years ago, I travelled to see the farmhouse dairy of cheese made from the largest number (300) of cows in England; and having seen the largest I walked across the valley and up the hill-side, to see the smallest dairy of cheese in all England. The maker is the wife of John Dinsdale, of Simonstone, near Hawes. The farmers of these dales and mountain-sides are noted for their thrifty habits, and for practising rigid economy; and Mrs. Dinsdale is, I think, an excellent illustration of how far the inhabitants "make the most of everything." Their household consists of five persons, three of them adults, and, with the exception of buying butter from May to October, their one cow supplies all their wants as to milk and butter; and, in addition, from it they have this year produced 76 cheese! Of these they have sold 67 cheese, weighing 233 lbs., retaining 9 cheese for home consumption. I purchased, as a curiosity, a cheese from this one-cow dairy which weighed 3 lb. 14 oz. Respecting the butter I may here remark that it is churned from cream which is slightly soured. The small farms in this locality are let at very high rents; indeed, compared with those of large arable farms in counties favoured with a milder climate the rent per acre appears enormous.—W. LIVESLEY, *Beck House, Wensleydale.*

A 'BUS STORY.—Mr. Frank Buckland, writing in *Land and Water*, tells the following story respecting a Frenchman, whose acquaintance with our language was exceptionally imperfect, and whose knowledge of our monetary system was also capable of great improvement. Some friend had told him that a sixpence was the smallest English silver coin, and on arriving at his destination after a long omnibus journey, he tendered a fourpenny bit in payment. The conductor tried to explain to him both by words and dumb show that the fare was sixpence. "Mossoo" naturally thought that, as a foreigner, he was being imposed upon, and repeatedly insisted upon the correctness of his payment. "Dat see shixpence." Again and again did the conductor attempt to bring him to a more satisfactory frame of mind, but in vain. The driver was getting impatient, and the conductor felt that he must give the thing up as a bad job. However, he could not conscientiously do this without relieving his mind by a parting shot. Putting his head inside the box, with a courteous salute, he inquired, with studied calmness, "Will any lady or gentleman oblige me with the French for a d—— fool?"

LANDLORDS' DUTIES AND TENANTS' DIFFICULTIES.

On Friday, November 2nd, a meeting of the members of the Derbyshire Agricultural Society was held in the Guildhall, Derby, for the purpose of continuing the discussion upon landlords and tenants, which was commenced at the dinner on the day of the last Show. Mr. J. G. CROMPTON, chairman of the committee, presided.

The CHAIRMAN stated that they had met together to continue the discussion which ensued at their last annual dinner which took place on the first day of the recent agricultural Show. He regretted excessively that he was absent on that occasion, being away from home, but he read with very great interest the remarks which were made by Mr. Coleman. They were pertinent and pointed, and Mr. Coleman introduced a subject of the greatest importance to everyone connected with the agricultural interest. He noticed that the subject of discussion might be summed up in the words—"Landlords' duties and tenants' difficulties"—which introduced them to a very broad and wide field, though of course on that occasion there was but little opportunity for discussion, inasmuch as it necessarily occupied some little time in the delivery of even condensed remarks upon such an important topic, and he noticed that many gentlemen expressed some little disappointment at not being able to give their opinion upon it. Hence the discussion was postponed until that day, and when they had heard a few further observations from Mr. Coleman he should be glad to hear what any gentleman had to say, and if the discussion was carried on in a fair spirit, and with a desire to throw light upon the matter, it could not but be productive of good, for it was one of the most important functions of the Society to bring to the front questions affecting landlords and tenants, and to throw light upon any difficulties which might exist.

Mr. COLEMAN then delivered an address upon "Landlords' difficulties and tenants' duties." After some prefatory observations he said that one of the greatest difficulties of the landlords of the present day was to do all that a good tenant required, and should have done. They were aware that the income of landed estates did not increase, and had not increased during the last 20 years to anything like the extent that the landlord's expenses had. Putting aside personal matters entirely, and taking the expenses in connection with building and improvements of all descriptions, and even repairs, they were becoming so heavy now-a-days that they made the landlords look round and consider where the money was to come from to keep them up. There were many landlords who would be very glad to do much more for their tenants than they now did, but they were stopped because of the increased cost; therefore farmers must not think because they did not get everything done that they required that it was the fault of their landlords. They had felt very keenly no doubt the rise which had taken place in the price of labour during the last few years, and they must remember that that rise had had a very great effect upon the landlord—upon his outlay, upon his interest—and having prevented him from making a sovereign do as much duty as it used to do, he was compelled to spend much more money to keep pace with the times than he had to do previously. Farmers knew that as they advanced in farming, as they began to keep more stock, and managed their land better than they used to, they wanted, better accommodation for themselves, their labourers, and their cattle, and

they would like to have things in a superior style to what they were twenty or thirty years ago. All that meant money. But the money which the landlord had to spend must come out of his rent, and the farmers could answer the question whether rents had increased in anything like the proportion that the expenses had. He thought he need not say it was on a par with everything else throughout the country, for as an instance they had only to look round and see what was required from the land now; this was not only in connection with tenants, for there seemed a disposition on the part of the authorities to make land pay as much as possible. In many cases they were running to a great expense, though some of the expenses were very necessary, and the Education Act was bringing an additional burden both upon the landlord and the tenant. In fact the increased cost of everything at present made the landlord feel the burden almost as much as the tenant felt it. When he spoke at the annual dinner he touched upon the great want of cottage accommodation, and he knew that many farmers were beginning to feel it more and more every day, because unless they had labourers living amongst them they would be placed in difficulty, as passing labour was getting scarcer. Every one would acknowledge that the cottage accommodation of this district was not what they would like it to be—but the question was how landlords could provide that accommodation? They knew the cost of building cottages, and they wanted better dwellings than the hovels which were frequently seen in the country. Then they must be constructed according to certain sanitary regulations, but to carry out these requirements meant money. He did not suppose that even with the present rate of wages the agricultural labourers could afford to pay anything like a fair rate of interest for the outlay incurred in building cottages. How was it to be met, for if the landlord spent money he must look for a return in the future. If farmers did secure proper accommodation for their labourers, it must be brought about by the landlords and tenants combining in some way, and sharing the necessary expense, for the labourers could no more afford to pay interest for the present price of bricks and mortar in the shape of rent than farmers could afford to pay double rent for their farms. He should be glad to see the tenant farmers of this country take up this question more actively than they had done at present, for the interest of the labourers was after all their interest. They were the labourers' direct employers. They were the persons to whom their services were rendered; they were the men who benefited by their labour; and if they did their duty and saw that the labourers' interests were properly cared for, and their wishes and wants attended to, the better servants would they become. And there was no doubt that unless both landlords and tenants took greater care of the labourers than they had hitherto done, they would not have either the quantity or quality of labourers which was desirable. There was another great difficulty which the landlord often found. It was the very vexed question as to how tenants should enter their farms and how they should leave them. Most men liked to have their farms in a good state when they took possession, and supposing that was the case there must be such rules as would compel them as far as possible to leave them in a similar condition when they vacated them. The question of agreements between landlords and tenants was a very knotty point, and there were hardly two people who agreed upon it. He had often thought that both

landlords and tenants never forgot their own interests, and being inclined to look rather too much upon that interest, hardly took an unbiased view of the situation of each party. He looked upon the position of landlord and tenant as a partnership, and unless they agreed upon terms which were just, and both parties felt they were having a proper and fair share of the business, it was not a satisfactory partnership. Such agreements were wanted as would induce good farming, and would not saddle the incoming tenant with too great a burden when he entered upon a farm. Take for instance the tillage system of Lincolnshire. He had known cases where the incoming tenant had had to sink almost one-half of his capital on unexhausted improvements, leaving him unable to work the farm as he should do, and he had consequently never made that progress that he would like. It would be very much against the interest of Derbyshire tenant farmers if they were to press this question of unexhausted improvements too far, for although the present race of farmers might have very large out-goings, they must expect that their sons or successors would have to suffer. These matters were supposed to be easily worked out between landlords and tenants, but there was a great difficulty in making agreements that would suit everybody. He would advise that they should be made to suit the particular district to which they applied, also to suit the times, and as Mr. T. W. Evans said at the dinner that they would construe all agreements as liberally as possible. The difficulties of landlords were mainly financial, but he also had difficulties of another sort. It was often very difficult for him to ascertain whether he was getting the right tenant to occupy his land, and in many instances he had to ask the advice of others respecting the applicants for his farms. He hoped, therefore, whenever farmers were asked respecting persons who were applying for farms that they would give their fair and honest opinion about them, for there was no doubt that the more they could raise the position and tone of the farmer, and the better class of tenants they could get on their farms, the better would the land be managed and the more beneficial would it be both to the landlords, the tenants, and the country as well. Turning to the second part of his subject, Mr. Coleman said the first duty of a tenant, he considered, was to be a good farmer. If he would manage his farm well, he did his duty to himself, to his landlord, and to his country, for after all the tenants were the men the country had to depend upon for making the land produce what it ought to do. He did not care whether it was a corn, a grazing, or a dairy district such as this, farmers knew the difference it would make, whether they were bound to go on the old-fashioned plan of cheese making, or upon the new fashioned plan of selling milk. They knew the returns were greater from one than the other, and what a benefit they were conferring upon the populations of large towns when they were doing their best to produce pure sweet milk, and deliver it to the large towns in a proper and cleanly manner. It was of very great importance, and becoming more so every day, and he should be glad to see the milk trade of this country taken up, even more than it was at present, by tenant farmers and those connected with land, because he thought it was one of the mainstays of farming, and that the more milk they could produce the better would they farm their land. They could not get rid of their summer supply of milk without having a large quantity of milk in winter, and they could not get that without going to Burton, or to the cake stores of the town, and this system would pay far better than

using what the farm produced and nothing more. They knew that although the broad acres of the country did not increase, the wants of the country were increasing every hour, and the expenses of the farmer were greater than they were formerly. Consequently, if a farmer did not make his land produce more than it did 20 years ago, although he might not be paying more rent he would go the wrong way. Such a farmer as Mr. Tomlinson would tell them that in consequence of the great pressure put upon them on account of the increasing expenditure they had been driven to far better farming than they contemplated years ago, so that this increased cost of working had done a vast amount of good, for it had compelled farmers to do their duty to their farms, and by so doing they had increased the production of the land, and thus benefited not only themselves but their neighbours. That was one of the principal things that a farmer had to do; though there were many other things which ought to be observed, such as the performance of various duties in connection with the parish to which he belonged, but the main thing which was incumbent upon him was to be a good farmer, and he must say that having to go over the vast extent of country as he did from one year to another, his experience led him to the conclusion that good farmers were not decreasing, but increasing, and that more attention was being paid to the value of manure purchased of the farm, and to feeding stuffs than formerly, if farmers were not paying that attention to labour that it was desirable to see. He had been over many farms during the last month, and he was glad to find that they were well manured and well farmed, though in some instances the fences had not received the attention they would have had 20 years ago, and which they ought to receive. Another duty of the tenant was to leave his farm in such a state that his neighbours might succeed him. He knew that there was a feeling amongst many farmers that there was no necessity, if a man intended to leave his farm, to devote so much attention to it during the last few years of his tenancy. What was required was that such an arrangement should be made that a man need not care, as far as pecuniary matters were concerned, whether he left his farm or not. But to bring that about they wanted the farm left in a good state for anyone who might take it. It was not desirable for either landlords or tenants to take advantage of each other. He had wished sometimes that tenants were more out-spoken, that they would really say what they thought, so that the landlords might know what their impression was about farms, and of the way in which they should be managed, for many of them could give valuable hints and would make landlords and their agents open their eyes if they said what they thought. He should be glad to listen to the remarks of practical farmers, and those remarks would no doubt have a great impression throughout the district.

Mr. MOORE made a few remarks showing the advisability of having better agreements, and said he had given up two farms to become the tenant of another, and now having farmed it for four years at a loss he had received notice to quit without a reason being assigned.

Mr. RADFORD considered that Mr. Coleman laid both the duties of landlords and the difficulties of tenants very fairly before the audience at the Agricultural Society's dinner, but there were some points upon which he thought he should like to express an opinion. On that occasion he referred to the advisability of tenants refusing to take farms unless the rents were placed at such a rate that they could live upon them.

When a farm was offered to a tenant, more particularly to a young man just starting in life, he became anxious to try his luck in the business, and he was thus frequently led to give more for a farm than he could afford. There lay the principal difficulty in the way of a tenant refusing to give more than a certain rent for a farm, for if one would not take it at a certain price another would come forward and give that amount. A good landlord should never bind a good tenant strictly to his agreement, and if a tenant studied his own interest he would always lay out considerably more on his own land than he sold off. A tenant could not afford to pay 10 per cent. for the erection of hay barns, as recommended by Mr. Coleman. He (Mr. Radford) would be glad to have hay barns erected for his own use, but 10 per cent. was more than he could afford to give, though he should not object to pay half that amount. It was certainly desirable for a tenant to have proper cottage accommodation for his labourers. His own men often had a mile or two to walk to and from their work, and it was a great drawback both to himself and to them. When cottages were provided in many instances there was only one bedroom. Many of the labourers had grown-up sons and daughters, and when they came on a visit they had to put a curtain across the bedroom. In his opinion the want of proper accommodation was the cause of a great deal of the immorality to be found amongst this class of people. He considered that upon every farm of any size there ought to be cottages erected even if the interest upon the outlay was charged upon the tenant, and he charged less rent than the interest amounted to. There was a good deal of land in Derbyshire which would be improved by being drained. He had drained a good deal of his own land, and the result had been very favourable; therefore he came to the conclusion that if more attention was paid to this matter both landlords and tenants would be benefited, though he did not think the tenant ought to pay more than 5 per cent. for the drainage. He should always wish a sufficient quantity of game to be on the land for gentlemen to enjoy their sport, but rabbits he did not like, for he had suffered a great deal from them during his time, though that was not the case now. The principal difficulty which farmers had now to contend with was with regard to their labourers and servants.

Mr. CARRINGTON thought that tenants should be careful not to ask for more buildings than they absolutely required, or he knew of farms which were spoilt for occupation by the large number of buildings put on them, the cost of which the landlords naturally expected interest upon. He thoroughly agreed with what Mr. Coleman had said about the erection of hay barns. He found that the straw grown in this neighbourhood was very greatly diminished, and he believed, in spite of what some political economists told them, that the tendency would be for it to still further decrease. It would be greatly to the benefit of the farmers of this district if hay barns were more generally provided. The cost of straw and the saving of labour was not only to be taken into consideration, but also the damage frequently done to stacks for want of being covered. When a farmer had plenty of hay barns he might carry his hay half a day sooner than if he had to put it altogether in the stack. He had been in Lancashire lately, and he found that the tenants were generally assisted to erect hay and corn barns. Mr. Coleman spoke on the first occasion very slightly respecting the Agricultural Holdings' Act, but he (Mr. Carrington) thought it was a step in the right direction, and though he did not advocate anything like the Irish Land Act in England, he was favourable to the Agricultural Holdings'

Act, because it for the first time acknowledged the interests of tenants in improvements. Amongst the difficulties which the tenants had to encounter, none were more formidable than those which arose from cattle diseases, and he thought the Legislature of this country might confer a great benefit, not only on the farmers, but on the whole community, by passing into law the recommendations contained in the report of the committee of the House of Commons with regard to cattle diseases. It was true that this year they had fortunately been exempt from the foot-and-mouth disease, but they could not expect to have the same exemption every year, and they knew what a great loss tenant farmers suffered from the prevalence of this disease a few years ago. He, however, felt that if the importation of foreign meat was placed on a proper basis, English farmers would no longer be subject to these attacks. He thoroughly agreed with the remarks which Mr. Coleman made respecting labourers' cottages. He was a large employer of labour, and nearly all his labourers lived in cottages over which he had control. He was convinced that if the young men were well housed and well treated they would be averse to leaving their employment and seeking other work, for when a man had been brought up to farm labour, if he had good cottage accommodation he was really in a better position than if he left the farm and obtained employment in the towns. But it was important that he should live within easy reach of his work, and have a house, in which, as long as he continued in his situation, he might expect to live in without being turned out at a week's notice. Mr. Coleman had spoken most truly about additional capital being required by farmers in the present day as compared with twenty or thirty years ago. He believed in a large outlay in feeding stuffs and manure, and he also believed in landlords giving anything like a good tenant full liberty both to crop and sell the produce as he thought fit, always providing that he took care to keep the land clean and to bring back to the farm as much or more than he sold off it. He knew that in Derby straw was selling from £7 to £8 a ton, and yet there were numbers of estates in this country where the tenants were forbidden by agreement to sell straw. A tenant ought to be allowed to sell either straw or hay when he could sell it to advantage, always providing that he brought back a full equivalent. He had lately been over many farms in Lancashire and Cheshire, and had been struck with the freedom allowed to tenants with regard to ploughing. He did not advocate that any such liberty should be given either in Derbyshire or Staffordshire, because a great deal of land in those two counties was ill adapted for tillage, and by ploughing it tenants might do their landlords very serious damage, but with regard to other things tenants ought to have full liberty. Most of those present had doubtless seen the agricultural statistics which had appeared in many newspapers, writers in which had drawn the inference that as the number of cattle had decreased the amount of tillage ought to be increased. How far that might be applicable to the south and east of England he was not prepared to say, but with regard to this immediate neighbourhood and the country to the north of it, an increase of pasture had been a public benefit. He did not deny that a larger amount of stock might be kept on a mixed farm, always providing it was suitable for the growth of roots and straw, but there was a good deal of land in this district which was hilly and difficult to work, and the climate was unsuitable to the growth of excellent corn, though if it was laid down to grass it would become much more valuable both to the tenant and the landlord. Therefore it would be well for tenants, as far as they could, to

seed down to permanent turf all land that would not be too expensive to do that, and which was ill adapted for tillage. He knew, however, that it was very uphill work to seed down to permanent pasture land which had been ploughed for many years, and it could not be done without considerable outlay and manuring, and therefore a tenant who would carry out a work of this kind ought to be assisted by his landlord if he could not do it himself.

Mr. GREATOREX said that there was no doubt the increased cost of building told against the landlords of the day; and he thought that if tenants had to bear a proportion of the expense of new buildings it would be a guarantee that unnecessary buildings would not be resorted to. As regarded cottage accommodation that was one of the difficulties which they had had to contend with for a long time; and he believed that the want should be supplied by the landlord paying part and the tenant part. It would, he was sure, be for the tenants' advantage that such accommodation should be supplied.

Mr. FOX said that, like Mr. Coleman and most of his class he was too well acquainted with landlords' difficulties. He believed that these difficulties had arisen not so much from the present generation as from want of knowledge and care on the part of both landlords and tenants in times gone by. There was a new era of things arising. There was, for instance, a great demand for building, and they had fortunately, owing to the action of Parliament, better means of meeting that demand than formerly. Drainage Acts had been passed and various laws which had very much assisted both landlords and tenants. With regard to the remarks of Mr. Greator, he must say that he had a strong objection to tenants building, because he believed it was the duty of the landlords to erect the buildings with, of course, the advice of the tenants, and for this reason, that the landlord or his agent had much more experience. As regarded the question of cottages, however, he agreed with Mr. Coleman that they should divide the loss which there must be in building good cottages. He did not think that the landlords should be saddled with the whole of that loss. As regarded the Agricultural Holdings' Act no one could adopt the Act entirely, and no one could make out precisely what some of the clauses meant; at the same time it laid down very valuable principles which were very useful to both landlord and tenant. As to competition for farms that was not so great as it used to be, and consequently tenants had an opportunity of standing a little better up for themselves.

Mr. COLEMAN: And they do it too.

Mr. FOX: Yes, and they do it.

Lord DENMAN said that having attended the meeting at which Mr. Coleman introduced this subject, perhaps the meeting would listen to a few remarks from him. He did not think the difficulties of the landlord were very great. He quite agreed that the relation of the landlord was that of a partnership, but he thought it should not be too much of a sleeping partnership on the part of the landlord. The Agricultural Holdings' Act established a very good principle with regard to unexhausted improvements. He believed that good farming was one of the best professions in this country. He himself had been a farmer both in England and in Scotland, and he knew where the shoe pinched. What he wanted to see was plenty and cheapness. He wanted to see plenty of stock and plenty of grain crops grown suitable to the land. The difficulties of landlords in his opinion could be easily surmounted. There ought to be a free communication between the landlord

or his agent and the tenant—the landlord should communicate with his tenant as to manuring and to every improvement which it was necessary to carry out.

Mr. WALKER was of opinion that, as regarded compensation for unexhausted improvements, it was necessary that the tenant farmer should not be crippled by any stringent agreement.

Mr. TOMLINSON thought that the difficulties of the tenants were far greater than those of the landlord. For instance, in his own neighbourhood the cessation of lime burning deprived them of one of the principal and best means of improving the land. They had now to go six or eight miles to fetch lime, and of course the cartage was considerable, so that it was much more expensive to improve the land now than formerly. He maintained that according to the cost of improving the land now-a-days nothing less than a 14 years' tenant-right was sufficient to recoup the tenant. And he would fearlessly state that the land would be better at the end of the 14 years than it was before. He himself lived under a landlord who was a perfect gentleman, but he would say that landlords generally would do well to look after the interests of their tenants if they wished to retain good tenants. Let them treat their tenants in that spirit of which Lord Denman had spoken.

Mr. WALTON said, with reference to the remarks of Mr. Moore, that any charge he had to make would be fairly and fully considered at the end of the term. He wished to say nothing more because this was simply a personal question.

Mr. CROMPTON, in summing up the discussion, said that he had never been present at a meeting at which there had been so much free and unrestricted interchange and expression of opinion, at which so much interesting and useful information had been elicited. There had been a most frank and free expression of opinion representing landlords' interests and landlords' difficulties on the part of Mr. Coleman, and an equally frank expression of tenants' difficulties on the part of Mr. Tomlinson and others. Every gentleman who had spoken had done so with authority, and it was impossible but that this interchange of opinion would produce the most beneficial results. It was one of the most important provinces of an agricultural Society to promote and further free discussion on subjects that were pressing and of interest to all connected with agriculture. With regard to the subject which had been discussed there was one word which Mr. Coleman used which met with his (Mr. Crompton's) entire approval, and that was that the relation of landlord and tenant could be regarded in no other light than that of a partnership. He claimed Mr. Coleman as his pupil in the adoption of that phrase, for he (Mr. Crompton) used it the first time he had the pleasure of coming in contact with the members of the Agricultural Society. The interest of landlord and tenant, he maintained, are one and indivisible. The landlord was the head of the firm and it was impossible to divide his interest from that of the tenant. The rents were simply the profits of the co-partnership. A good deal had been said about cottage property, and every one almost had admitted that while houses must be provided, it is a joint question, and the expense should be borne jointly. For the tenant this simply meant an increase of rent, and the question would be whether the tenant was able to bear that increase. As to Mr. Radford's remarks with regard to rabbits they would all be glad when these were exterminated. In conclusion Mr. Crompton thought the meeting should be very much obliged to Mr. Carrington for his very able review of the agricultural position.

Mr. COLFMAN briefly replied to some of the remarks which had been made in the course of the discussion. He thanked the speakers for having let him off so easily. He expected a blowing up, but as it was they had patted him on the back.

The discussion then terminated.

As the members were leaving the room Mr. BROUGH was about to introduce the question of having a Chamber of Agriculture for the county.

The CHAIRMAN suggested that it would be better to have a separate meeting for the discussion of this subject, especially as the majority of the gentlemen had now left the hall. He thought Mr. Brough should read a paper on the subject at the next meeting.

Mr. BROUGH said he would be very glad to do so.

On the motion of Lord DENMAN, seconded by Mr. BROUGH, a vote of thanks was passed to Mr. Crompton for presiding.

ROOT SHOWS.

CARTERS'.

Messrs. Carter are once more to be congratulated on the success of their Annual Root Show, which was held on the 14th and 15th ult., at the Agricultural Hall, Islington. We have from time to time pointed out the utility of these exhibitions, and their great influence for good on the agriculture of the country. By careful selection and indefatigable perseverance in perfecting newly-developed varieties our leading seedsmen have put it in the power of farmers to produce increased quantities of cattle-food of superior quality, each year showing some improvement on the preceding, and by offering substantial prizes to their customers a spirit of emulation has been induced which does credit to both seedsmen and root-growers, and cannot fail to make its mark in the fields, in the homesteads, and in farmers' pockets—where it is greatly needed. The growth of good roots is one of the first steps towards the production of good beef and mutton, and certainly the first step towards growing good roots is to procure good seed; that being so, the seedsmen who supply a genuine article of the most approved description are no unimportant factors in successful agricultural industry.

The past season has been an unfavourable one for root crops generally, and on walking round the galleries of the Agricultural Hall, which the Messrs. Carter have managed to fill with their exhibits, the impression is immediately conveyed that the turnips win this time. Nor is this at all to be wondered at seeing that this class of root has had more favourable conditions of growth than either swedes or mangels. During the shorter time of their existence the elements have smiled on them. Mangels have had much to contend with, and neither in size nor shape are they equal to those of last year's growth. The same will apply in a lesser degree to the swedes. Good seed and skilful cultivation have been found, but a good season is also required to bring the plants to perfection. In Class 1, for 12 roots of Carters' Imperial Hardy Swede, there were no less than 109 entries, comprising the names of some of our most noted agriculturists. The class throughout was exceedingly creditable for the season, and the excellence of this well-known variety is a matter about which there is no doubt, and which no unfavourable season can disprove. Taking the whole of the entries together, there is no lack of quality, but a want of uniformity. Growers and seedsmen have done their best, but the season has

beaten them. The best roots in this class are disqualified from the very patent fact that they had been oiled. This is a great pity, and disappointment to Mr. Cave, of whom it is but just to say that he has succeeded in growing, for Mrs. Morten, the best quality, and handsomest roots in the Show, not only in this class, but in several others. As he is by no means a novice at prize-taking, his mistake is the more noticeable. The first prize falls to Mr. H. P. Truell for some large-sized, weighty, handsome roots, which, on careful inspection, show signs of skilful manipulation, which, however, was not condemned by the judges. The second prize falls to Mr. Mitchell, for an entry which has no very special merit to an outsider; and the third prize to Messrs. Perry, for sound, but rather rooty, swedes; the fourth prize to Mr. Gurney; and the fifth to Messrs. Williams. Mr. Cave exhibits four entries in this class, all of very excellent quality, notwithstanding the season, but all of them disqualified for the reason stated. Messrs. Beale, Bennett, Belsey, Garth, and Norman, and the Bedford Urban Sanitary Authority, are amongst the best exhibitors in this large class, which represents a large amount of solid, useful keep, and is without doubt a great credit to the Messrs. Carter and the exhibitors. Class 2, for eight roots of Carter's Warden Yellow Globe Mangel, comprises 53 entries. Here again the roots are sound and good, but not so regular and handsome as usual. This is a misfortune, not a fault. There are, however, some very excellent exhibits, and Mrs. Morten is again the exhibitor of the best quality roots in the class. The first prize is awarded to Messrs. Hepburn; second, Mrs. Morten; third, Mr. Biles; fourth, Messrs. Emery; fifth, Mr. Kemp. In Class 3, for 8 roots of Carter's Mammoth Long Red Mangel, there are 33 entries. These roots are not as heavy as they were last year, which cannot be expected, and considering the peculiarly unfavourable conditions of growth for this particular class of root, the show is very good indeed. Mrs. Morten again 1st with clean and shapely, but not very large, roots; Mr. Kent 2nd with small roots of nice quality, but representing no great feeding weight per acre; Mr. Farrer 3rd, also with small roots; Mr. Ensor 4th, with a large but more uneven entry; and Mr. Truell 5th. The Earl of Warwick and Mr. Pemberton both show good entries, but neither for competition. Class 4, for 8 roots, Carter's Champion Intermediate Mangel, is a smaller but better class of 21 entries. The 1st prize was awarded to Messrs. Hepburn and Sons for

some large, heavy roots, not very true; the 2nd to Mrs. Morten, for a neat and clean entry much truer to type the 3rd to Mr. Upton; the 4th to Mr. Ensor for large and uneven roots; and the 5th to Mr. Biles for better quality. Mr. Kemp exhibited roots which had both size and quality, practically better than any of the prize-takers; these were passed over by the judges, but we believe were afterwards awarded an extra prize, which was well deserved. Class 5, 8 roots of Carter's Yellow Tankard-shaped Mangel, also a good one; 23 entries. Mrs. Morten 1st with clean-grown shapely roots; Mr. McKinlay 2nd; Mr. Ensor 3rd; Lord Warwick 4th; and Mr. Beale 5th. Mrs. Morten has five entries in this class, all of them of good quality and type; Mr. McKinlay three, also good, and some good roots from the Earl of Warwick. Class 6, for 8 roots of Mangels not included in the above classes, consists of 20 entries. Mr. Ensor 1st; Mr. Garth 2nd; and Mrs. Morten 3rd. Class 7, for 12 roots, White Globe Turnips, 34 entries, makes an excellent show and finer turnips have seldom been shown. The Duke of Northumberland 1st, with large, shapely, and heavy roots. Mr. Packer 2nd, but scarcely inferior; Mr. Body 3rd; and Mr. Chatterton 4th. Messrs. Knighton show good heavy roots. Class 8, for 12 Greystone Turnips, 20 entries. Mr. Bridger 1st, for large but not very heavy roots; Mrs. Morten 2nd, with good quality as usual; Mr. Neame 3rd, for roots thin on the stem, and very shapely and Mr. Barrett 4th, with a small but pretty entry. Class 9, for 12 roots Red Lincolnshire or Paragon Turnips, 14 entries. This is a showy class, with size and quality both conspicuous. The prizes are as follows—J. Street 1st; Mr. W. Langley 2nd; Mrs. Morten, 3rd; and Mr. C. West 4th. Class 10, for 12 roots Imperial Green Globe Turnips, 42 entries—the best in the Show. This has always been a favourite root, and this year it appears to great advantage. Mr. Jordan 1st, with medium-sized roots, very true; Mr. West second, with excellent shape and quality; Mr. Westaway third, with larger roots; and Mr. Jordan fourth. This class throughout is one of great merit. Class 11, for 12 roots, Carter's Improved Purple-top Mammoth Turnips, 30 entries, also a very excellent one, including some very large and sound roots. Mr. Bridger first, Mr. Beeson second, Messrs. Emery third, and Mrs. Morten fourth. Class 12, for 12 roots Yellow-fleshed or Hybrid Turnips, 20 entries, is one which deserves to be more extensively cultivated. There is little or no doubt that this root is more certain to grow than a late swede; it will usually stand the winter, if required, and the quality for feeding is very little if anything behind the swede. We think it is better to have a good crop of hybrids than an indifferent crop of swedes. Mr. Farhall is first with not the best quality; Mr. Warren second, with rather uneven weights; the Duke of Northumberland third; and Mr. Bartholomew fourth. Mr. Beale shows some small roots of beautiful quality and perfect shape. Class 13, of 12 roots Carter's Imperial Green Kohl Rabi, 17 entries, was an improvement on last year, and shows very decidedly the

great usefulness of this plant, which has not yet obtained the favour it deserves. Given any sort of bad season the Kohl Rabi can stand it better than swedes, and it is a far more certain crop. The entries were very good indeed. Mrs. Morten, first; Mr. Ensor, second; the Eton Local Board third; and Mr. Broomfield, fourth. The Purple Kohl Rabi in Class 14 were, as usual, not quite equal to the Green. The Central London District Schools, first; Mr. McKinlay, second; Mr. Garth, third; and Mrs. Morten, fourth. The White or Yellow Belgian Carrots in Class 15 were a very creditable show. The first prize was taken by W. A. Medhurst; second, J. Chatterton; and third, W. L. Beale. Class 16, for Red Carrots, was also a good one, the quality of some of the exhibits being excellent. First prize, Earl of Warwick; second, S. Beamish; third, Duke of Northumberland. Class 17, for Drumhead Cabbages, was well filled, but the cabbages, although they do not lack size this season, are rather short in quality and weight. First prize, Earl of Harrington; second, J. L. Ensor; third, G. A. Broomfield. Classes 18 to 22 are for the Heaviest Single Root of the different varieties of Mangel and the Imperial Hardy Swede, the prizes for which are as follows:—Class 18: First prize, F. Lythall; second, J. L. Ensor; third, Mrs. Morten. Class 19: First prize, Mrs. Morten; second, Central London District Schools. Class 20: First prize, Mrs. Morten. Class 21: First prize, Mrs. Morten; second, J. L. Ensor; third, Central London District Schools. Class 22: First prize, Her Majesty's Bagshot Farm; second, Mrs. Morten; third, Earl of Warwick. Classes 23 to 27, for the handsomest or best shaped roots in the Mangel and Swede Classes, were well filled and very creditable; but they were of necessity more affected by the peculiarly adverse season than any of the classes. Roots this year are, as a rule, sound but not very shapely. The prizes were as follows:—Class 23: First prize, Mrs. Morten; second, J. L. Ensor; third, Messrs. Emery.—Class 24: First prize, Mrs. Morten; second, J. L. Ensor; third, G. A. Broomfield.—Class 25: First prize, Messrs. Hepburn; second, Mrs. Morten; third, W. Goodson.—Class 26: First prize, Mrs. Morten; second, J. L. Ensor.—Class 27: First prize, H. P. Truell; second, R. Daintree; third, Mrs. Morten.

Of Vegetables there was a very capital show, and the quality throughout left nothing to be desired. Class 28: First prize, G. W. W. Digby, second J. Neighbour, third R. B. Wingfield-Baker, fourth W. S. Baldwin.—Class 29: First prize T. Creed, second Lord Sondes.—Class 30: First prize Lord Sondes, second Bedford Urban Sanitary Authority.—Class 31: First prize T. Creed, second W. S. Baldwin.—Class 32: First prize Rev. Canon Tarver, second H.R.H. the Prince of Wales.—Class 33: First prize Lord Sondes, second S. Cooper.—Class 34: First prize E. Thorne, second H.R.H. the Prince of Wales. The competition from the Sewage Farms was, as usual, very interesting, and exceedingly creditable, but, as we have already said, mangels are not

o the front this year. Class 35 : First prize Hepburn and Son, second Central London District Schools.—Class 36 : First prize Earl of Warwick, second Bedford Urban Sanitary Authority.—Class 37 : First prize Bedford Urban Sanitary Authority, second Earl of Warwick. There was the usual competition for special prizes offered by manure manufacturers for roots grown from Messrs Carter's seeds by their manures. Class 38 : G. Boraston. Class 39 : South Metropolitan District Schools.—Class 40 : F. Lythall.—Class 41 : Messrs. Emery. In the extra class S. Robinson was first, J. Fall second, and E. R. Owen third.

The judges were:—Professor Buckman, Mr. Tait, Mr. Brebner, Mr. Penny, Mr. Briggishaw, Mr. Blake, and Mr. John Algernon Clarke. The prizes ranged from ten guineas to ten shillings in the various classes, in addition to the five-guinea cups of the manure manufacturers; amounting in all to about £250.

SUTTONS'.

Messrs. Sutton and Sons, of Reading, held their twenty-ninth annual Root Show in their spacious warehouses on November 24, and, on the whole, it must be pronounced to have been the most successful exhibition they have ever held. There were in all 38 classes, comprising no less than 1,400 entries, against 1,240 last year, contributed by agriculturists in all parts of the kingdom. The Queen, the Prince of Wales, and many noble earls and lords were amongst the competitors, but their names do not appear very prominently in the prize-list. On Friday the show was visited by the Chinese, Spanish, and Italian Ambassadors, who expressed great a tonishment at the size of some of the specimens, and particularly at that of the gigantic cabbages. The judging was done on Friday morning by Mr. James Brebner, Her Majesty's Royal Norfolk Farm; Mr. William Briggishaw, Her Majesty's Royal Bagshot Farm; Professor James Buckman; Mr. Henry Simmons, steward to Mr. John Walter, M.P.; and Mr. Henry Tait, Her Majesty's Royal Shaw Farm, for roots; and Mr. Coombes, gardener to Mr. R. Benyon; and Mr. Fowle, gardener to Sir Henry Mildmay, Bart., for vegetables and potatoes.

In many of the classes the competition was very keen, which is not surprising when it is considered that upwards of £250 were given in prizes. Messrs. Sutton's spacious Farm Seeds Order Room was very nearly filled by mangels and swedes alone, and after the several side warehouses had also been filled it was found necessary to devote a room down-stairs to the exhibits, a necessity which has not arisen on any previous occasion.

Class 1 was for 12 specimens of Sutton's well-known Champion Swedes, a variety that has no superior, if an equal, taking size, quality, and symmetry all into consideration. In this class there was a very large number of entries, and a considerable proportion of them were remarkably good. The first prize of ten guineas went to Mr. J. F. Burrell, Frimley, Farnborough, for twelve

roots of very nice quality, clean and neat without fangs. Messrs G. and J. Perry, of Acton, Condoover, were second, and Mr. Cordery third, with larger roots not quite so prime in quality as the first prize winners. Mr. Strange won the 4th, and Mr. Linklater the 5th prize. The Long Red Mammoth Mangels in Class 2 were not up to the usual average of excellence. In size they were much below what have been seen at previous exhibitions, and they were too fangy to be considered of very fine quality. The twelve roots which take the first prize weighed 310lb., and the heaviest single root shown weighed 38lb., a very good weight for the season, but nothing in comparison with the champion roots of former years. The prizes in this class were awarded in the following order, quality rather than size having gained the day: Mr. R. B. Blyth, Hon. Mrs. Hay, Mr. G. Bishop, Sir Paul Hunter, and Mr. J. Ratcliffe. One lot of mangels shown by Mr. Smith, not for competition, were very large, and yet superior in quality to most of the entries. They were trimmed, and therefore should have been disqualified, but otherwise they would have had a good chance of the first prize. The Berkshire Prize Mangels in Class 3 were a remarkably good lot for the season. Considering what a very bad year it is for mangels the size of many of the roots was surprising, and for quality we have never seen a better collection. Growing in great part out of the ground, with a single small tap root, and rarely any fangs, this variety of mangel is one of the prettiest grown, and for size there are few of the Globe varieties that can equal it. It was far ahead of the other classes at the Reading Show in uniformity of excellence, although the ugly Mammoth Reds had the heaviest single lots. The Hon. Mr. Hay took the first prize with twelve magnificent roots weighing 262lb., Mr. Blyth being second with a lot weighing 238lb. Messrs. J. and W. Clarke, Messrs. Hepburn and Son, and Sir F. Smythe were third, fourth, and fifth. There was a nice lot of Intermediates, as far as quality is concerned, but the size generally was not great. The Hon. Mr. Hay was again in the first place with twelve large and symmetrical roots weighing 234 lb., a very good weight for the somewhat delicate Intermediates. Mr. Blyth was again second, Messrs. Clarke, and Messrs. Hepburn again third and fourth, and Mr. Crocker fifth. The Hon. Mrs. Hay again proved invincible in the Golden Tankard Mangels, showing twelve beauties which weighed 229 lb. The other prize-takers were Messrs. Clarke, Madame Van der Weyer, Her Majesty the Queen, and Mr. Blyth. The Golden Tankards were not so large as we have seen them, but their quality was superb. Everyone knows that the past season has been one of the worst for mangels known for many years past, and it was a particularly bad one for those sorts which come earliest to maturity, such as the Mammoth Long Red and the Golden Tankard. Globe mangels often grow longer into the autumn, and thus make up for time lost in summer.

When we return to turnips we find no occasion any longer to speak of small roots; for the season has been

as favourable for turnips—in England, though not in Scotland—as it was unfavourable for mangels. There was no prettier class in the Show than Class 6, for Sutton's Imperial Green Globe Turnips. They were beaten in size by at least two other varieties, but for symmetry and quality they were superb. The five prizes were taken by the following exhibitors in the order in which the names are given: Mr. W. Palmer, Messrs. Clarke, Mr. Humfrey, the Marchioness of Downshire, and Professor Buckman. The Pomeranian White Globes, in Class 7, were a magnificent lot for size, symmetry, and quality alike. Mr. Edward Whitfield was first with twelve models of great size, grown on his sharp gravelly soil at Goring Heath, near Reading. Mr. H. T. Willis was second with twelve other beauties, quite equal in quality to Mr. Whitfield's lot, but not quite so big. The other prize-takers were Mr. W. Wyeth, Mr. Sinnell, and Mr. W. Webb. The biggest lot of turnips was that in Class 8, for Sutton's Purple Top Mammoth. For size we have never seen such a collection before, taking them as a whole. The twelve in the first-prize lot, belonging to Mr. J. H. Guy, of Whitchurch, weighed 228 lb. One was 48 inches round, and 20 lb. in weight, and another weighed 23 lb. Mr. Andrews was second, Mr. Balford third, Sir Paul Hunter fourth, and Mr. C. Reading fifth. The Grey Stone Turnips in the next class were not so showy, but some of the entries were of beautiful quality, notably that of Mr. Gray, who was first in this class as in that of the Green Globes. Messrs. Simmonds, Lord Allington, Mr. T. Simmonds, and Mr. Reading were the prize-takers. In Class 10 the first prize went for quality to Mr. Atherton, Mr. Keep's second prize lot being bigger. There is a little too much tendency in these Red Paragons to get hollow in the crowns, a fault which is to be observed most in some of the highest quality roots of the class, but one that should undoubtedly be corrected by selection, although in a variety that comes to feed off early the point is of less importance than it would be in the case of a later sort. Mr. C. Keep was second, Mr. Thorp third, and the Duke of Portland fourth. The Yellow-Fleshed Turnips in the next class were not a good lot, the season for turnips in Scotland and the Northern English Counties, where the variety is chiefly grown, having been unfavourable. The Marquis of Aylesbury, Mr. Cartwright, Mr. Stevenson, and Mr. Webb were the winners. In Class 12 for Tankard Turnips, sometimes called Scotch Pudding Turnips there was not a remarkable lot, although it was better, than at many previous shows. Probably these turnips are usually fed off early, and are not saved for exhibition. The prizes were taken by Mr. Ewer, Mr. Wyeth, Sir Paul Hunter, and Messrs. J. and W. Clark. There was a good lot of Sutton's Improved Kohl Rabi. Mr. R. A. Stevens was first, Mr. John Walter, M.P., second, Mr. Beale third, Sir Paul Hunter fourth, and Mr. Garth fifth. The Drum-head Cabbages were very good. The largest measured 5 ft. 6 in. round, and the three heaviest, which took the last prize for Mr. Robinson, of Melbourne, Derby,

weighed 53lb., 51lb., and 43lb. respectively. Sir Paul Hunter was second, the Earl of Harrington third, Mr. J. B. Odell fourth, and Mr. Pickworth fifth. There was a remarkably good lot of White Belgian Carrots. The prizes fell to the Hon. Mrs. Hay, Sir Paul Hunter, and Mr. Farrow.

The Roots grown with sewage were decidedly inferior both in size and quality to those grown without it. For Mammoth Long Red Mangels the winners were the Earl of Warwick first, and the Eton Sewage Farm second. For Yellow Globes or Oxhearts Messrs. Hepburn and Sons, Sewage Farm, Dartford, were first, and the Eton Farm again was second. The Bedford Local Board came to the fore in the Golden Tankard class, and the Reading Sewage Farm was second. For single specimens of Sutton's Champion Swede Sir F. Smyth was first for the weight prize with a root weighing 24½lb., Her Majesty the Queen being second with one of 23½lb.; while for quality and form Major Shafto was first and Mr. Toomer second. Heaviest Mammoth Long Red Mangel: First, Mr. R. B. Blyth (38lb.); second, Mr. Bishop (30lb.) Finest-formed root of same variety: First, Hon. Mrs. Hay; second, Mr. Blyth. Heaviest Berkshire Globe or Oxheart: First, the Hon. Mrs. Hay (28½lb.); second, Mr. Blyth (25lb.) Finest-formed root: First, Mr. Blyth second, Hon. Mrs. Hay. Heaviest Golden Tankard: Prize, Hon. Mrs. Hay. Finest-formed: Messrs. J. and W. Clarke.

The garden vegetable department was well-filled. There was a fair show of potatoes, a remarkably good one of onions and parsnips, and short carrots were also very good, long carrots being inferior. The prizes were awarded as follows:—Collection of not less than twelve varieties of potatoes, nine tubers of each.—First prize Major Thoyts, second Viscount Eversley, third Mrs. Crawshay, fourth J. Walter, M.P. Class 28, Sutton's Magnum Bonum Potatoes, eighteen tubers—First J. Walter, M.P., second A. A. Bathurst, M.P., third T. Pickworth, fourth Thomas Williams, Class 29.—For the best collection of Vegetables, twelve distinct varieties, three specimens of each.—First prize, Viscount Eversley; second, Mrs. Crawshay; third, P. Southby; fourth, C. Eyre.—Class 30.—Twelve Sutton's Improved Reading Onions.—First prize, P. Southby, second, The Prince of Wales; third, H. Veroy; fourth, Viscount Eversley.—Class 31.—Twelve Long Red Carrots.—First prize, Hon. Mrs. Hay; second, the Earl of Warwick; third, A. C. Forbes.—Class 32.—Twelve Short Red Carrots.—First, E. Pease; second, J. Muspratt; third, the Earl of Craven.—Class 33.—Twelve Parsnips.—First prize R. Allfrey; second, R. Lloyd; third, Countess of Yarborough.

The prizes offered by manure manufacturers for collections of roots grown with their manures, from Messrs. Sutton's seeds, were won as follows:—Class 34.—A prize, value £5 5s., offered by Messrs. Morris and Griffin, Wolverhampton, Sir R. Sutton, Bart. Class 35.—A prize, value £5 5s., offered by Messrs. Ohlendorff and Co., 15, Leadenhall-street, London, Mr. R. B. Blyth. Class

36.—A prize, value £5 5s., offered by Messrs. James Gibbs and Co., manure merchants, 16, Mark Lane, London, Mr. G. Jenner. Class 37.—A prize, value £5 5s., offered by Odams' Chemical Manure Company, 109, Fenchurch-street, London, Sir R. Sutton, Bart. Class 38.—A prize, offered by Mr. J. B. Owen, of Kintbury Mill, Berks, agent for Messrs. Prentice's manures, £3 3s., Mr. Thomas Owen.

In spite of the bad weather of Saturday about 5,000 persons visited the Show.

W E B B S'.

[From *The Midland Counties' Herald*.]

One of the largest exhibitions of roots ever brought together in the United Kingdom was held under the auspices of Messrs. Webb and Sons, at their Seed Warehouse, Wordsley, Stourbridge, on Nov. 20, and was very numerous attended. Ireland, Scotland, and Wales each contributed to the display, and there was scarcely a county in England that did not send its quota. Amongst the exhibitors were Her Majesty the Queen, the Duke of Sutherland, the Duke of Portland, Earl Craven, the Earl of Warwick, the Earl of Denbigh, the Earl of Dartmouth, the Earl of Stamford and Warrington, Lord Lovatt, Lord Hampton, Lord Northwick, Lord Moreton, Lord Leigh, Lady Ward, Viscount Hill, Sir George Chetwynde, Bart., Sir H. S. Stanhope, Bart., Col. Dyott, M.P., Mr. Chas. Coombe, Mr. W. O. Foster, Mr. T. H. Farrar, Mr. W. L. Beale, Mr. W. T. Carrington, Mr. J. Palley, and Mr. T. Jowett. The Show was arranged in three sections, the first being for roots grown without sewage cultivation, the second for roots grown with sewage cultivation, and the third for cereals. A very noticeable advance has been made this year in the turnip classes, and especially as regards Webbs' selected Green Globe and Webbs' Purple-top Mammoth, the two leading varieties offered by the firm. Their introduction to the public was, of course, preceded by repeated tests at the trial grounds, on the experimental farms at Kinver, and they have become and continue in favour with practical farmers. The Green Globe is recommended for main crop, and the Purple Top Mammoth is particularly useful for early feed, while both are remarkably hardy. Of these two varieties there were eighty-six dozen of the former, and sixty-seven of the latter, staged; and the specimens could not have been surpassed either as regards weight, symmetry, or quality. In the Green Globe class Mr. J. Hutt, Kidlington, took first prize with a dozen roots, unsurpassable for excellence and shape, many having the appearance of having been turned out of a mould. His Grace the Duke of Portland came second with a dozen, which, though clearly not equal to first-class prize takers, were such as would inevitably have taken the leading place in a less extensive competition. In the Purple Top Mammoth class the first prize fell to Mr. R. Simpson, Swinbrook, for twelve specimens, the perfection of which attracted general attention; and the second prize was given to Mr. G. Timms, Asthall, for a lot of nearly equal merit. The exhibits in the classes for Webbs' Beef Heart, Devonshire Graystone, White Globe, and Yellow Tankard turnips were numerous, and very much above the average quality of roots usually seen at shows. The first-prize winners in each of these classes were the Duke of Portland, Mr. J. Hutt, Mr. P. Bradshaw, Banbury, and Mr. William Hancox, Saraden. As usual, the leading place in the

Show was taken by Webbs' Imperial Swede, which has the reputation of being a heavy cropper, as well as highly nutritious, and of possessing good keeping properties. The large number of entries and the great excellence of the exhibits decided Messrs. Webb to offer two extra prizes, consisting of four and six guinea cups. In the two classes for this variety of swede there were 496 entries, against 481 last year. But far more notable than the advance in respect of number was the greater excellence of the quality of nearly every lot staged. Mr. Bennett, of Ross, took the first prize in the leading class with twelve roots, which showed the perfection to which this swede can be brought. Messrs. G. and J. Perry, of Acton Pigott, were second with a dozen of all but equal merit. The other prize-winners were Mr. J. Franklin, Thame; Mr. J. Beach, The Hattons; Mr. C. Coombe, Chobham; Mr. J. Palley, Lower Eaton; and Mr. W. Hancox, Fair Green. In the class for the heaviest roots of Webbs' Imperial Swede Mr. R. Morley, of Enfield, was first, Mr. Tudor, Burntwood, second, and Mr. Pratt, of Lickhill, third, with roots of great weight. In the mangel classes the premier place was held by Webbs' Improved Colonel North Yellow Globe Mangel, the number of which was very large, and the competition close, the prize-winners being remarkable for cleanness of growth and fineness of skin. All the exhibits showed in great perfection the characteristics of this mangel, of which between eighty and ninety tons per acre have been grown by the Earl of Warwick at Heathcote Farm. Mr. T. H. Farrar, Dorking, took the first prize, and Mrs. Cubberley, Alcester, second. Mr. G. Sotham, Thame, was awarded the first prize for the twelve heaviest with a mammoth lot. Webbs' Yellow Fleshed Tankard Mangel was well represented. This root is stated to be greatly appreciated by dairy farmers for its flesh-forming as well as milk-producing qualities, and to be a wonderfully heavy cropper, as much as seventy-five tons per acre having been produced. Mr. J. Hutt, Kidlington, took first prize, and Mrs. Cubberley second. Of Webbs' Yellow Intermediate Mangel, which is said to be especially well suited for sharp, gravelly soils, and well adapted for close growing in the rows, there were numerous exhibits, and in this class, too, the general superiority of quality was not less marked than in the others. Mr. T. Moxon, Eveshall, took first prize with twelve very excellent roots, and Lord Leigh was second with a dozen which all but matched them. The class for Webbs' new Kinver Globe Mangel was large, and all the roots reached a very high grade of excellence. The first prize for the best roots was carried off by Mr. T. Moxon, the second by Mr. T. H. Farrar, while Lord Leigh was successful in the heaviest class. The specimens of Webbs' Mammoth Long Red Mangel were numerous, and of very equal quality throughout. Mr. F. Lythall, Offchurch, took first prize for heaviest and best roots, and Mr. A. F. Ford, Madeley, the second for the best. The classes for roots grown with the aid of sewage contained some marvellous examples, the prizes being taken by the Eton Sewage Farm. Green Kohl Rabi is not so much a favourite amongst agriculturists in some districts as it ought to be, considering that it does not, like turnips, impart a flavour to the milk of animals fed upon it. There was, however, a considerable show, and the prizes were taken by Messrs. G. and J. Perry, Mr. W. L. Beale, and Mr. C. Pitt. The exhibits of Webbs' Drumhead Cabbage were of an extraordinary size, and the quality appeared good enough for domestic purposes. The carrots shown were an excellent class, combining quality and size. The season has been most

unfavourable for potatoes throughout the country; but notwithstanding this there was a very excellent show of tubers, including Snowflake and Webb's Surprise. The heaviest swede weighed 23½lbs., the heaviest Globe 30½lbs., and the

heaviest Long Red Mangel 44lbs. In the division for cereals there were very fine samples of Webb's Challenge White Wheat and Kinaver Chevalier Barley, as well as of Black Tartarian Oats.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

DEPUTATION TO THE PRIME MINISTER.

A deputation of the Council of the Royal Agricultural Society of England waited upon the Prime Minister at his official residence in Downing-street, at noon, on Nov. 23., with reference to the recommendations of the Select Committee on cattle plague, and the importation of live stock. The members of Council present were Colonel Kingscote, C.B., M.P., president; Sir M. W. Ridley, Bart., M.P.; Mr. T. C. Booth, Mr. Charles S. Cantrell, Mr. J. Druce, Mr. B. T. Brandreth Gibbs, Mr. J. Hemsley, Mr. R. Hornsby, Mr. Bowen Jones, Mr. H. Chandos Pole-Gell, Mr. Joseph Martin, Mr. Thomas Pain, Mr. Charles Randell, Mr. James Rawlence, Mr. Robert Russell, Mr. Jabez Turner, Mr. W. H. Wakefield, Mr. Jacob Wilson, Professor Simonds, and Mr. H. M. Jenkins (Secretary).

Colonel KINGSCOTE, in introducing the deputation, said that other agricultural societies had expressed a wish to join them on that occasion, but as they had asked his Lordship to receive a deputation from the Council of the Royal Agricultural Society they had thought it better to come alone. No doubt his Lordship was aware of the constitution of the Royal Agricultural Society, that the members elected to serve on the Council were representative as far as possible of all the counties in England; and generally speaking the attendance at the Council Meetings range from 30 to 40 or more of its members of all political opinions. At the last Council Meeting, held on the 7th inst., at which the resolution asking his Lordship to receive the deputation was passed, there were 40 members present, representing the following counties:—Bedfordshire, Bucks, Cambs, Cheshire, Derbyshire, Durham, Essex, Gloucestershire, Herefordshire, Kent, Lincolnshire, Middlesex, Monmouthshire, Norfolk, Northumberland, Nottinghamshire, Oxfordshire, Shropshire, Staffordshire, Suffolk, Warwickshire, Westmoreland, Wiltshire, Worcestershire, and Yorkshire, and the district of South Wales. The resolution which after discussion had been unanimously agreed to at that meeting was the following:—

"That this Council would respectfully urge upon the Government the desirability of taking as soon as possible the necessary steps to carry into effect the recommendations of the Select Committee on cattle plague and the importation of live stock."

The noble Earl would see that that resolution was agreed to by gentlemen representing almost every portion of England. Col. Kingscote then drew his Lordship's attention to the following resolutions, which were unanimously adopted by the Council last March:—

"That seeing the precautions hitherto adopted for the prevention of outbreaks of rinderpest and other contagious diseases of animals in Great Britain have not been successful, it is the opinion of this Council that nothing short of the total prohibition of the importation of live stock from European ports will meet the exigencies of the case.

And further,

"That uniform and compulsory measures be enforced throughout the Kingdom for the suppression of contagious diseases of cattle."

Those resolutions clearly showed that the farming community were willing to put up with such home restrictions as were necessary, for the Council knew the feelings of the farming interest quite as well, if not better, than any other body. The Council of the Royal Agricultural Society having passed these resolutions last March, naturally felt an interest in getting agricultural and other evidence before the Select Committee; although the recommendations of that Committee did not go so far as the resolution passed in March, the Council would be satisfied if these recommendations were put into effect. No one could impartially peruse the evidence given before the Select Committee without seeing that the various interests concerned had been very fairly represented. The question had not been taken up merely from selfish views, but to protect the producers of meat from disease. This he pointed out would tend very materially to reduce the cost of meat to the consumer. In their opinion, it was impossible for the farmers to contend against diseases that ravage the country, unless they had an assurance that they were not being allowed to come from abroad. Therefore the Council were most anxious to impress upon his Lordship, and upon the Government, the importance of the recommendations of the Select Committee becoming law.

Mr. CHARLES RANDELL said he represented several large estates in the Midland Counties, in addition to being a large farmer himself. The tenant farmers in that district had suffered very much from diseases affecting their stock, but it was quite certain that, in breeding stock especially, their losses from foot-and-mouth disease had been enormous. Breeding animals were not only thrown out of condition by attacks of disease, but in many cases were rendered permanently useless for breeding purposes. His Lordship had observed that for some years past there had been a considerable decrease in the number of live stocks in this country. The fact was that diseases had diminished their number, because farmers had thus been deterred from breeding, although the price of meat having been high and that of feeding stuffs low, there had been a double inducement to farmers to increase the number of their stock. The farmers of the country were anxiously looking for some results from the report of the Cattle Plague Committee. It had, perhaps, come short of their expectations, but feeling that the enquiry had been an exhaustive one, and looking at the interest of the consumer as well as of the producer, probably they ought not to have expected a more favourable result. The deputation now asked his Lordship's assistance to make these recommendations become law. There was no hope of being free from cattle diseases until some such regulations were enforced. There was one point on which farmers felt very strongly, and that was the conclusion which the Committee had arrived at that all foreign animals should

be slaughtered at the port of debarkation. Speaking on behalf of the farmers of this country he could say that they were prepared to submit to any restrictions deemed necessary to prevent the spread of these foreign diseases. In the past, he was quite aware, some of the restrictions had been complained of as being vexatious but that was because the regulations lacked uniformity. The more stringent regulations were, the more farmers would believe in their efficiency. He should like to ask that in addition to the recommendations of the Committee the whole of their report should be taken into consideration, and more especially the clause that all animals should be slaughtered at the port of debarkation. The deputation felt that they were not asking anything which could injuriously affect the consumer. On the contrary, the enforcement of proper regulations would increase the production of meat in this country to a very considerable extent: and the consumer as well as the producer would be equally benefited. The farmers would be prepared to submit to any restrictions, and would go on breeding stock in a more hopeful state of mind than they had been in for some time past, if they could only be free from a recurrence of the importation of these contagious diseases.

Colonel KINGSCOTE, as a member of the Select Committee, remarked that it was the intention of the Committee that all animals should be slaughtered at the port of debarkation.

Sir M. W. RIDLEY, Bart., M.P., said that coming from the North of England, he could say that the agricultural interest there was most deeply concerned in the hope that these recommendations might be carried out speedily. He thoroughly endorsed all that had been said by Colonel Kingscote and Mr. Randell. In the North of England people saw that it was a question for the consumer as well as the producer, and he hoped that it would be considered by the Government in that light.

The Earl of BEACONSFIELD, in reply, said he imagined the first and important point was to ascertain whether it was the intention of the Government to propose legislation in consequence of the report of this committee, and he had no hesitation in informing the deputation that it was the intention of her Majesty's Government to introduce a Bill (Cheers). But saying that rendered it difficult and almost impossible for him to enter into any details of the question, because they would probably lead to misapprehension (Hear, hear). The matter was at that moment under the consideration of the Cabinet, and he trusted the result of their labours would be the early introduction of a measure. Of course, regard must be had to the state of public business, but they would take the first opportunity which presented itself of bringing it forward. With regard to the point mentioned by Mr. Randell, one of the most difficult questions before them in regard to the main question was regarding slaughter at the port of debarkation. This was a matter that must be considered with reference to the general interest of the country. The noble earl did not wish any inference to be drawn from any of his remarks as to the intentions of the Government, because he thought that as the Government had proposed legislation, and as a measure would be brought forward, one of the earliest in the next session, the country should not press them for details at the present moment (Hear, hear). He would say this—that if they wished to stamp out these terrible pests, which are injuring one of the most important—perhaps the most important—interests of the country, there must be, of course a universal effort. This could not be limited to pro-

hibiting the importation of foreign animals and the action of the Government; but her Majesty's Government expected the co-operation of all classes of the agricultural interest, viz., that there should be a general effort on their part to assist the Government, and that they should submit cheerfully to necessary restrictions; for, unless such were severely and completely observed, it was impossible to effect the desired purpose. It had been a satisfaction to his lordship to have the expression of their opinion upon this matter, and, indeed, it was principally with that object that he had contemplated the pleasure of meeting them and receiving the resolutions of a body so important as the Council of the Royal Agricultural Society. He hoped it would be found that the measure which the Government intended to bring forward would be conducive to the welfare of the country, and would be satisfactory to those whom the deputation represented. At the same time, between their interest and the general interest of the country, he, for one, made no distinction whatever. His lordship concluded by saying that he had much pleasure in receiving the statement of their opinion (cheers).

The deputation, having thanked the Prime Minister for his courtesy, then withdrew.

TESTIMONIAL TO MR. HENRY CORBET

The following Subscriptions have already been received :—

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Subscriptions may be paid to any Member of the Committee, or to the Secretary of the Farmer's Club, Caledonian Hotel, Adelphi, W.C.; or to Mr. Thornton, 7, Princes-street, Hanover-square, W.; or they may be sent to the London and County Bank, 21, Lombard-street, E.C., credit of "Corbet Testimonial Fund."

AGRICULTURE OF DENMARK.

The condition of Danish agriculture presents certain points that are interesting to ourselves, since England is by far the largest consumer of Danish produce. Consul Crowe enters rather fully upon this subject in his recent Report showing that Denmark has been pursuing a course similar to what is apparent from our own statistics of agriculture, namely, the reduction of corn-growing and the increase of other farm products. Formerly corn was the chief article shipped, but in 1872-73 the export of live stock, provisions, and dairy produce had equalled that of corn, and at the present time is more than double in amount. The result of this change in the cultivation of the soil and nature of its products is, that Denmark no longer grows a sufficiency of the cheaper sorts of cereals for home consumption, but has to import yearly considerable quantities of some kinds, especially rye.

The export of grain, however, partly home-grown, partly Swedish, is still large. In 1876, Denmark exported to England goods valued at £3,905,418 sterling, which realised in England £4,135,825. These goods were mainly the produce of agriculture, live stock and provisions. The estimation in which some of these articles is already held in England is shown by the high prices they fetch in our markets. Danish butter, for instance, is only second to that of Belgium—viz., priced in 1875 at £6 3s. per cwt., or 8s. per cwt. more than French butter, and at still higher rates in comparison with the German or Dutch article. A probable reason why the Danish product ranks under that of Belgium is that the best quality is shipped in tin cases to the Brazils, East India, and China. Belgium exports, however, but about 4,000 tons annually to Great Britain, and, as regards quantity, is not in dangerous competition with Denmark. Farmers find it more and more to their advantage to produce fine articles, which always find a ready and remunerative market, whereas second qualities are at times almost unsaleable as an export article, as both America and Ireland are keen competitors in this direction.

The praise given to the preparation of butter applies also to provisions and salt pork, all of which are prepared with care and honesty. Formerly France and Belgium had almost the exclusive trade in eggs with England; but other countries now ship large quantities, and Denmark in the year 1876 figures in the export list for 1,600,000 scores sent to Great Britain, giving her

an income of £92,000, which falls mostly to the share of the small farmers. Poultry, likewise, has been largely shipped, and as both these minor branches of the export trade are in their infancy, and are capable of considerable development, we may look forward to Denmark for increasing yearly supplies of these articles.

The new Danish Export Cheese Company are doing their best to encourage the fabrication of cheese suitable for export, and if they have not yet succeeded in providing an article able to hold its ground in the English market, it is not from want of spirit and enterprise, but rather from inability to compete with Americans, who not only in the cheaper kinds rule the English market, but actually can undersell the Danes in their own markets in spite of their protective duties. Fears have been expressed that the increasing imports of preserved meat, and of live cattle from Canada, would influence prices and discourage the Danish cattle trade, but it is unlikely that even a largely-increasing import for the next five years would affect British retail meat prices, although it may occasion fluctuations in the wholesale markets until it has subsided into a steady trade. The whole of the foreign cattle trade with England is so small that Denmark may certainly continue to look to this country for years to come as her nearest and best market. It is to be hoped, however, that she will have to turn her attention to the dead meat trade, instead of continuing to send us live animals.

The condition of the labour market appears to have been seriously affected by the last year's bad harvest, in connection with the scarcity of money and the general reaction which ensued after the commercial activity and enterprise of the three preceding years. During this period share companies and industrial enterprise gave a forced activity to trade, and attracted the labouring classes in large numbers to the towns, to the detriment of the country, where agricultural labour became scarce and dear, it being then in the power of the men themselves to fix the rates of day labour. Now, for the first time, the phenomenon presents itself of a flux of labour to the country, where the farmer is making his own terms, and the day rates are again falling to what they were in 1872. The labourers' position will actually be worse than it then was; for the last four years' high wages taught him habits of

comparative luxury, which his present pay cannot keep up, and it is feared that discontent and ill-will towards his employer will be the result.

As a means of improving the condition of the agricultural labourer, the Danish political economists propose to facilitate the acquisition of very small freehold patches, sufficient to feed a cow and grow corn for a family. They hope by this means to encourage domestic industry and extended cultivation of the soil—and instances are cited of their good and practical results—and proposals have appeared in the press advising that when the Church glebe lands are sold, that they shall be

parcelled out in very small lots, at low rates and on easy terms, and brought within reach of the farm labourers. This, added to State encouragement to local industries, is the means the Government are now expected to apply to solve the labour question, since private enterprise is crippled and exhausted. Much is already done by private foundations and direct private aid to improve and help the working classes in their struggle for existence; indeed, in no Continental State are there so many co-operative unions and stores for aiding the poor and cheapening the necessities of life for the poorer classes as in Denmark.

REVIEW OF THE CORN TRADE,

FROM THE MARK LANE EXPRESS FOR THE WEEK ENDING NOVEMBER 26.

The agricultural situation in this country has undergone but little change during the past week. High winds have prevailed, accompanied by occasional showers of hail, and a good deal of rain has fallen in places which, in the more backward districts, has prevented farmers from finishing wheat-sowing; but generally speaking this important operation has been brought to a close under circumstances which augur well for the rapid development of the plant. In Scotland farming operations have been delayed by the boisterous and stormy weather, and but slow progress has been made either with wheat-sowing or potato-planting. As the season is now considerably advanced it is unlikely that the usual acreage will be planted with wheat in this part of the kingdom. The cereal yield is turning out very deficient throughout the country, and this fact, coupled with the unsatisfactory growth of roots, has gone far to render the present year a most unremunerative one to the farming community. Supplies of home-grown grain have again been moderate, both at Mark Lane and the country markets, and English wheat has been, generally speaking, in deteriorated condition. The smallness of supplies may perhaps be accounted for to some extent by the fact that the present price of wheat offers very little inducement to farmers to thrash, whereas barley has been steadily improving of late, and there has therefore been more disposition to market this than wheat. At any rate the meagre supplies of the latter indicate the expectation of higher prices later on. The imports into London last week were again unusually heavy, the return on Monday showing an arrival of over 100,000 qrs., a large proportion of which consisted of Russian wheat, the shipments of which may yet be prolonged by the mildness of the season, so

news as to the probable closing of the Baltic ports having yet reached us. Indian wheat is also coming to hand very freely, and it is a noteworthy fact in commerce that 75 per cent. of the whole traffic of the Suez Canal has passed through under the British flag. The weight of supplies already received from these two sources added to the vast shipments from American Atlantic ports, still fetter the trade, although during the past fortnight the incubus has exercised less depressing power, owing to the unsatisfactory yield of the home-crop upon thrashing. For the first ten weeks of the present cereal year the shipments of American wheat from Atlantic and Pacific ports have been nearly 2,500,000 qrs., and should the outward movement continue on the same scale, the year's exports, including flour, will probably supply 8 out of the 13 million qrs., at which the requirements of this country are estimated. This fact is a somewhat startling one at first sight, but it must be taken for what it is worth, having due regard to the fact that America may at any moment ship maize in preference to wheat, stocks of the former being light in this country and prices relatively high. There has been a fair consumptive demand during the week for most classes of wheat off stands, and values remain for the present stationary. Higher rates have been demanded for maize, which have checked the inquiry, but this article still occupies a firm position, while 8d. to 1s. per qr. more money has been paid for grinding barley. The oat trade has ruled slow, but, in the limited business passing, late rates have been maintained. The sale of English wheat noted last week were 40,970 qrs., at 51s. 8d., against 49,586 qrs. at 48s. 1d. in the previous year. The London averages were 59s. 8d. on 1,052 qrs. The imports into the kingdom for the week ending

Nov. 17th were 1,241,495 cwts. Wheat, and 135,243 cwts. flour. The improved tone which characterised the grain trade during the preceding week was well maintained on Monday last, when, in spite of very heavy imports of foreign wheat, the trade was fairly active, and the tendency of prices rather in sellers' than buyers' favour. Many of the samples of the home-grown wheat were deteriorated in condition owing to the prevalence of damp weather, and the weight of the demand fell largely upon such foreign produce as was suitable for mixing purposes on account of its dryness and strength. The week's arrivals of English wheat amounted to 2,500 qrs., and, with a moderate supply fresh up to market, the trade ruled quiet at former prices for finer qualities; while inferior sorts, of which a large proportion of the offerings was composed, were neglected and the turn lower to sell. The arrivals of foreign wheat were again excessive—in all rather over 132,900 qrs., of which quantity 32,102 qrs. were from North Russia, 25,529 qrs. from the East Indies, and 32,467 qrs. from American Atlantic ports, the remainder being from Germany. The demand was more active than for some weeks past, and a steady consumptive inquiry was met at fully former quotations; while American descriptions not being so much pressed for sale, realised an occasional advance of 6d. to 1s. per qr. The week's exports were 6,418 qrs. The supply of barley consisted of 1,900 qrs. of home-grown and 7,890 qrs. of foreign. Malting descriptions were in request at previous prices, while grinding sorts realised an advance of from 6d. to 1s. per qr. on the week. There were 16,326 qrs. of American maize reported, and sellers asked more money, which somewhat checked business. The imports of oats were 48,894 qrs., and the trade ruled slow, inferior sorts being occasionally 6d. per qr. cheaper. On Wednesday the return showed 170 qrs. of English wheat and 18,250 qrs. of foreign. The market was poorly attended, and, with a moderate demand, no quotable change took place in the value of either wheat or feeding corn. On Friday the supply had increased to 360 qrs. of English wheat and 54,520 qrs. foreign. A better feeling was apparent in the trade, and millers bought pretty freely at an advance of 6d. to 1s. per qr. on Monday's prices. Feeding stuffs were quiet. The imports of flour into the United Kingdom for the week ending November 17th were 135,243 cwts., against 179,483 cwts. in the previous week. The receipts were 16,280 sacks of English, and 5,902 sacks and 18,979 barrels of foreign. In sympathy with the improved tone in the wheat trade, business has ruled quiet but firm, and no quotable change has occurred in the value

of either sacks or barrels. The week's imports of beans were 31,022 cwts., and of peas 44,060 cwts., showing a decrease of 94,415 cwts. on the former, and 8,159 cwts. on the latter. Both articles have met a fair inquiry, and beans have improved 1s. per qr. on the week. The deliveries of malt were 71,502 qrs., and the exports 1,568 qrs. Brewers still buy with considerable caution, but holders show no disposition to give way, having regard to the steadiness of the barley trade. Increased activity has been noticeable in the agricultural seed trade, and buyers are beginning at last to regard red cloverseed with much attention. Supplies of English seed have not yet come to hand in sufficient quantity to fix quotations, but there has been a fair demand for finer qualities of foreign produce. The home demand in America for this article has been decidedly large, and as markets there continue firm no large export movement to this country appears likely for the present. White clover and alsike have maintained the recent advance, but trefoil remains neglected. No change has taken place in rape or mustard, but canary is beginning to be inquired for, although, at the moment, the anticipated speculative demand hangs fire. The principal provincial markets have been moderately supplied during the past week, and very little quotable alteration can be observed in either wheat or spring corn. At Liverpool on Tuesday the market was well attended, and a healthy trade was done in wheat at former prices. Barley was steady, owing to scarcity, and beans brought 3d. to 6d. per qr. more money. A fair business was done in maize, and quotations were well supported, mixed American closing steady at 29s. 3d. to 29s. 6d. per 480lbs. The week's imports included 57,000 qrs. of wheat, and 22,700 qrs. of maize. At Newcastle the wheat trade has ruled firm at the full prices of the previous week, but the amount of business passing was not very large. Maize has been quiet, and other articles unaltered in value or demand. At Gloucester the market has been fairly supplied with English wheat, which has sold slowly at former currencies. Maize and barley have improved 6d. per qr., and oats remain dull. At Edinburgh on Wednesday there was but a dull sale for both wheat and barley at a decline of 1s. per qr. Oats were also 6d. to 1s. per qr. lower, and beans neglected. The market was well supplied with grain from the farmers. At Leith the weather has been wet and stormy, and, with fair arrivals of wheat, barley and flour, the grain trade during the week has been quiet at unaltered quotations. At Wednesday's market Scotch wheat declined 1s. per qr., but the little business passing

in foreign was effected at late rates. Native barley was 1s. per qr. cheaper, but there was a fair demand for foreign at previous currencies. At Glasgow the week's arrivals have been large of wheat and flour, but the demand has been rather better for all articles, although prices remain unaltered. At Cork the trade has been dull for both wheat and feeding stuffs, and the former has receded 6d. to 1s. per qr. An improved consumptive demand has been experienced for maize, and buyers have been able to satisfy their wants on former terms. At Belfast maize has brought 6d. to 1s. per qr. more money, and there has been a fair trade done in wheat and flour on last week's prices.

The following are the reports from Mark Lane during the month:—

MONDAY, NOV. 5.—The arrivals during the past week have been: English wheat, 8,267 qrs.; foreign, 61,158 qrs. Exports, 8,880 qrs. There was again a very small supply of English wheat at market this morning, and sales progressed slowly at last week's prices. Of foreign the arrivals were heavy of American descriptions, but more moderate than of late of other sorts, and a quiet demand was experienced chiefly for red American varieties, at 1s. to 2s. per qr. less money. Country flour, 17,951 sacks; foreign, 6,010 sacks, and 14,150 brls. Country flour was 1s. per sack cheaper, and barrels met a limited inquiry at 6d. less money. English barley, 4,553 qrs.; Scotch, 411 qrs.; foreign, 10,083 qrs. Malting sorts were in good demand at an advance of 1s. per qr., and grinding descriptions were firm at fully late rates. Malt: English, 13,759 qrs.; Scotch, 989 qrs. In moderate request, and without quotable alteration. Maize, 9,447 qrs. There was sufficient steadiness in the trade, but quotations were the turn easier on the week, but a fair inquiry. English oats, 1,135 qrs.; Irish, 270 qrs.; foreign, 34,851 qrs. Exports, 1,175 qrs. Fine Russian descriptions were the turn in seller's favour, but other sorts sold slowly at last week's prices. English Beans, 775 qrs.; foreign, 5,718 qrs. A steady trade at about previous currencies. Linseed, 195 qrs.; Exports, 1,949 qrs. Firm, but quotably unaltered.

MONDAY, NOV. 12.—The arrival during the past week have been: English wheat, 8,428 qrs.; foreign, 110,574 qrs. Exports, 7,269 qrs. The arrival of English wheat at market this morning was again very small, and the trade ruled slow at about last Monday's prices; of foreign the imports were exceedingly heavy, and with a large attendance of millers a decline of 1s. per qr. took place on all varieties, but the reduction attracted an increased demand. Country flour 31,721 sacks; foreign, 8,431 sacks and 8,986 brls. In limited request, and 6d. per barrel and 1s. per sack cheaper. The nominal top price of town-made was reduced to 50s. per sack. English barley, 3,790 qrs.; Scotch, 399 qrs.; foreign 8,188 qrs. There

was a quiet but steady inquiry for both malting and grinding descriptions, at fully late rates. English malt, 14,740 qrs.; Scotch, 850 qrs. Exports, 27 qrs. In moderate request, at former currencies. Maize, 1,095 qrs. Quotations were a shade easier on the week, but a healthy tone prevailed, and a fair amount of business took place. English oats, 1,850 qrs.; Scotch, 40 qrs.; foreign, 45,084 qrs. Exports, 975 qrs. A quiet but steady trade for all descriptions at last week's prices. English beans, 1,174 qrs.; foreign, 12,353 qrs. The turn cheaper to sell, with a moderate inquiry. Linseed, 84,948 qrs. Exports, 2,485 qrs. Unaltered.

MONDAY, NOV. 19.—The arrivals during the past week have been: English wheat, 2,500 qrs.; foreign, 102,485 qrs. Exports, 6,418 qrs. There was again a very small supply of English wheat at market this morning, and sales progressed slowly at last week's prices. Of foreign the arrivals were very large, and with a good attendance of millers a steady consumptive demand was experienced, at late rates. Country flour 16,280 sacks; foreign, 5,903 sacks and 18,979 brls. A quiet trade, and last week's quotations could not be exceeded. English barley, 1,219 qrs.; Scotch, 681 qrs.; foreign, 7,890 qrs. Both malting and grinding sorts were in fair request at an advance of 6d. to 1s. per qr. on the week. Malt, English, 17,092 qrs.; Scotch, 410 qrs. Exports, 1,568 qrs. In moderate demand at last week's prices. Maize, 16,826 qrs. A steady sale as fully previous currencies. English oats, 914 qrs.; Scotch, 245 qrs.; Irish, 1,400 qrs.; foreign, 48,894 qrs. Exports, 2,260 qrs. The demand was inactive, and prices occasionally the turn easier. English beans, 822 qrs.; foreign, 156 qrs. A moderate business was done at about late rates. Linseed, 38,559 qrs.; Exports, 2,052 qrs.

MONDAY, NOV. 26.—The arrivals during the past week have been, English wheat, 2,853 qrs.; foreign, 60,177 qrs. Exports, 6,747 qrs. There was again a short supply of English wheat fresh up to market this morning, and factors asked 1s. per qr. more money, but the advance checked business, and was only obtainable on the finest samples. Of foreign the arrivals were more moderate than of late, but still fair, and with an average attendance of millers the trade ruled quiet at an improvement of 1s. per qr. on the week, for all varieties. Country flour, 17,241 sacks; foreign, 8,027 sacks and 9,460 barrels. Barrels were occasionally the turn dearer, but business was inactive. English barley, 3,602 qrs.; Scotch, 469 qrs.; foreign, 5,271 qrs. Malting descriptions ruled steady, and grinding sorts were 6d. to 1s. per qr. dearer. Malt, English, 19,201 qrs.; Scotch, 888 qrs. Exports, 1,243 qrs. In moderate request, but without quotable alteration. Maize, 7,106 qrs. Sellers asked rather higher prices, but the trade was quiet, and buyers could, generally speaking, satisfy their wants on former terms. English oats, 731 qrs.; Scotch, 45

qrs.; Irish, 800 qrs.; foreign, 87,491 qrs. Exports, 223 qrs. Old Russian corn was occasionally the turn dearest, but other qualities sold slowly, at last week's prices. English beans, 966 qrs., foreign, 1,859 qrs. A slow sale at previous currencies. Linseed, 12,471 qrs.; exports, 2,088 qrs. Quiet, but steady.

IMPERIAL AVERAGES

For the week ending Nov. 24, 1877.

	Wheat	Barley	Oats	5s. 6d.	4s. 6d.	3s. 6d.
	89,834	87,996	8,996	5s. 6d.	4s. 6d.	3s. 6d.

LONDON AVERAGES.

	Wheat	Barley	Oats	5s. 6d.	4s. 6d.	3s. 6d.
	1,083	988	—	5s. 6d.	4s. 6d.	3s. 6d.

COMPARATIVE AVERAGES.

Years.	Qrs.	s.	d.	Qrs.	s.	d.	Qrs.	s.	d.
1873	50,996	61	0	90,301	44	5	3,832	25	8
1874	63,653	43	6	108,682	43	10	3,432	27	11
1875	46,019	46	8	72,280	36	10	3,738	26	5
1876	50,713	47	5	87,083	39	4	3,344	25	9
1877	39,524	51	5	87,996	44	0	3,996	24	3

AVERAGES

For the Six Weeks	Wheat.	Barley.	Oats.
ENDING	s. d.	s. d.	s. d.
Oct. 20, 1877	53 9	43 6	23 5
Oct. 27, 1877	53 7	43 4	23 8
Nov. 3, 1877	53 8	43 4	24 2
Nov. 10, 1877	53 5	43 3	24 6
Nov. 17, 1877	51 8	43 8	24 9
Nov. 24, 1877	51 5	44 0	24 3
Aggregate Avg. of above.	53 7	43 0	24 1
The same period in 1876	47 9	39 3	25 5

FLUCTUATIONS in the AVERAGE PRICE of WHEAT.

Prices.	Oct. 20.	Oct. 27.	Nov. 3.	Nov. 10.	Nov. 17.	Nov. 24.
53s. 6d.	—	—	—	—	—	—
53s. 7d.	—	—	—	—	—	—
53s. 8d.	—	—	—	—	—	—
53s. 9d.	—	—	—	—	—	—
53s. 10d.	—	—	—	—	—	—
53s. 11d.	—	—	—	—	—	—
53s. 12d.	—	—	—	—	—	—

FOREIGN GRAIN ENTERED FOR HOME CONSUMPTION DURING THE WEEK ENDING NOV. 24.

	Wheat.	Barley.	Oats.	Beans.
	308,781	31,885	136,389	5,183

REVIEW OF THE CATTLE TRADE DURING THE PAST MONTH.

The cattle trade, though quiet, has ruled tolerably firm. The supplies were about the average, and included a fair sprinkling of choice breeds. As the restrictions imposed upon the movements of cattle beyond the four mile radius have now been rescinded, we may look for more liberal stocks. The receipts of beasts from abroad have been very weak. The stormy weather has doubtless hindered shipments, and thus curtailed our resources in this respect, but the actual weight of meat exhibited has been sufficient for requirements. From America the arrivals have declined. The Tanning season is now about to be brought to a close, without anything special having occurred to make it in any way different from its predecessors. Scotland has not been over well represented as regards number; but Ireland has sent a fair quantity. The general top price has remained almost unvaried at 6s. per 8 lb. for the best Scots. Medium and secondary qualities have, however, frequently met a dull sale, ruling more or less irregular in value.

The sheep pens were sparingly filled. Throughout the trade has been quiet but steady, and but trifling fluctuations have occurred in prices. The best Downs and thoroughbreds have changed hands at 6s. to 7s., and in a few exceptional cases at 7s. 2d. per 8 lb. Calves and pigs have sold at about late rates.

The total imports of foreign stock into London last week consisted of:—

	Head.
Beasts	5,492
Sheep	57,167
Calves	766
Pigs	173

COMPARISON OF IMPORTS.

	BEASTS.	SHEEP.	CALVES.	Pigs.
1876	13,300	59,008	1,346	319
1875	11,929	45,138	1,348	760
1874	14,155	44,843	1,247	1,331
1873	9,473	34,733	1,934	2,562
1872	4,226	35,112	2,389	304
1871	12,846	56,299	1,867	2,811
1870	14,906	43,830	2,177	2,463
1869	9,964	32,091	1,713	2,308
1868	9,391	18,163	598	353
1867	10,761	33,302	618	2,069
1866	13,278	38,389	1,390	1,187
1865	16,254	53,517	2,526	7,770
1864	17,137	34,793	2,970	3,947
1863	11,030	30,447	1,770	2,308
1862	6,839	28,577	1,659	633
1861	5,295	27,833	946	1,241
1860	6,981	32,723	1,604	893
1859	5,927	21,907	997	159
1858	4,786	18,358	1,174	156

The arrival of Beasts from our own grazing districts, as well as from Scotland and Ireland, thus compare with the three previous years:

	Nov. 1874.	Nov. 1875.	Nov. 1876.	Nov. 1877.
From Lincolnshire, Leicestershire, and Northamptonshire	7,820	10,050	9,150	9,500
Other parts of England, including Norfolk, and Suffolk	2,050	3,040	1,710	1,310
Scotland	858	247	813	816
Ireland	1,543	2,750	6,500	4,330

The supplies of stock exhibited and sold at the Metropolitan Cattle Market during the month were as under:

	Head.
Beasts	15,400
Sheep	39,050
Calves	680
Pigs	180

At the corresponding date last year the supplies exhibited were:

	Head.
Beasts	33,550
Sheep	99,770
Calves	2,990
Pigs	170

Beasts have sold at from 4s. 6d. to 6s. 3d.; sheep, 5s. 6d. to 7s.; calves, 4s. 6d. to 6s. 4d.; and pigs, 3s. 10d. to 4s. 8d. per 8 lb., sinking the offal.

COMPARISON OF PRICES.

	Nov. 1873.	Nov. 1874.
	s. d.	s. d.
Beef from	4 4 to 6 6	4 6 to 6 6
Mutton	4 4 to 7 0	4 4 to 6 4
Veal	4 4 to 5 8	4 8 to 5 10
Pork	4 4 to 5 8	4 0 to 5 0
	Nov. 1875.	Nov. 1876.
	s. d.	s. d.
Beef from	4 0 to 6 4	4 0 to 4 6
Mutton	4 6 to 7 4	4 6 to 7 2
Veal	4 6 to 6 8	5 6 to 6 10
Pigs	4 6 to 5 8	4 6 to 5 6

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